The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1652.—Vol. XXXVII. LONDON, SATURDAY, APRIL 20, 1867. {STAMPED ....SIXPENCE. UNSTAMPED..FIVEPENCE.

MR. JAMES CROFTS, STOCK AND SHAREBROKER, No. 1, FINCH LANE, CORNHILL. (Established 24 years.)

HOLDERS of mining shares DIFFICULT OF SALE in the OPEN MARKET may find purchasers for the same through Mr. CROFTS' agency. Also parties requiring ADVICE how to act in the DISPOSAL or ABANDONMENT of doubtful mining stocks may profitably avail of Mr. CROFTS' long experience on the market in all cases of doubt or difficulty, legal or otherwise.

Mr. CROFTS is a BUYER of any number of FRONTINO AND BOLIVIA shares.

PRINCE OF WALES continues to be the leading mine of the market. The total value of the ends, &c., is now £215 per fathom. The 153 tons of ore sold on Thursday will, it is estimated, yield £1200, and the produce for April may reach (by estimate) 130 tons. The only safe guide to the value of these shares is the OFFICIAL REPORTS sent to the office.

*** Telegrams instantly answered.

Bankers: National Bank of Scotland, Finch-lane. 1

WILLIAM LANE (SUCCESSOR TO JAMES LANE), 44, THREADNEEDLE STREET, LONDON, E.C., STOCK AND SHAREDEALER (Established Thirty Years), has FOR SALE the following SHARES:—

5 Bryn Gwiog, £14¾.	50 Drake Walls, 10s.	20 North Crofty, £4 12s.
0 Caldbeck Fells, 13s. 3d	20 East Russell, £3 2 6	50 Hollybush Coal, £1 12s
5 Chontales, £2 13s. 9d.	25 E. Rosewarne, 9s.	50 Okel Tor, 23s.
5 Clifford, £5 7s. 6d.	50 East Snaefell, 20s. 6d.	50 Prince of Wales, 53s 6
0 ChivertonMoor, £5 17 6	50 East Chiverton, 21s.	20 Rose and Chiv., £5½.
0 Don Pedro, £1 7s. 6d.	10 Great Laxey, £18½.	30 South Darren, 20s. 3d
	25 Gt. No. Laxey, 23s. 6d	5 WestChiverton, £72½

BUYER of 50 Marke Valley, £4 2s. 6d.; 20 East Caradon; 50 East Lovell, £5½; 10 West Chiverton, £71½; 15 Great Wheal Vor, £18½; and 5 Bryn Gwiog, £14—all for cash, or the fortnightly settlement. 2

MR. LELEAN, ENGLISH AND FOREIGN STOCK AND SHAREDEALER, 11, ROYAL EXCHANGE, LONDON, E.C. Bankers: Robarts, Lubbock, and Co., Lombard-street. 3

GUIDE TO INVESTORS.—MR. LELEAN'S STOCK, SHARE, AND FINANCE REGISTER for April contains the ninth of a series of articles on the whole circle of Investments, with such information as is necessary to guide intending investors amidst the shoals and quicksands of the multifarious species of investments now in the market. Published by Mr. BAKER LELEAN, at his offices, 11, Royal Exchange, London, E.C. 6d. per copy, or 5s. annually, post free. 4

MR. WILLIAM WARD, STOCK AND SHAREDEALER, No. 29, THREADNEEDLE STREET, LONDON, E.C. 6

MR. JOHN BATTERS, STOCK AND MINING SHAREBROKER, 13, THROGMORTON STREET, LONDON, E.C. 7

MESSRS. McNEILL AND LONG, STOCK, SHARE, AND MINING DEALERS, 31, THREADNEEDLE STREET, LONDON, E.C. 8

MESSRS. WARD AND JACKMAN, STOCK AND SHAREDEALERS, CUSHION COURT, OLD BROAD STREET, CITY, E.C. Closing Prices, Friday Evening, April 12.

	Buyers.	Sellers.		Buyers.	Sellers.
Chiverton Moor	£ 5¾ -	£ 6	Marke Valley	£ 4⅛ -	£ 4⅜
Clifford	5 -	5¼	North Treskerby	1¾ -	2
East Basset	17 -	19	North Crofty	4⅜ -	4⅝
East Caradon (ex div.)	5⅛ -	6	Prince of Wales	52s. -	54s.
East Carn Brea	2⅝ -	2⅞	South Crofty	16½ -	18¼
East Lovell	8¼ -	8¾	South Frances	18 -	20
East Russell	2⅞ -	3⅛	West Chiverton	71½ -	72½
Great Laxey	18 -	19	Wheal Buller	22 -	24
Great Retallack	3¼ -	3½	Wheal Mary Ann	13 -	14
Great Vor	18 -	19	Wheal Seton (ex div.)	95 -	100

Messrs. WARD and JACKMAN refer their friends to their remarks on p. 257. Messrs. WARD and JACKMAN beg to announce their offices will be CLOSED until TUESDAY morning. April 18, 1867. Bankers: London and Westminster, Lothbury. 9

MR. THOMAS THOMPSON, MINING OFFICES, 12, OLD JEWRY CHAMBERS, LONDON, E.C. Strongly recommends the immediate purchase of Westminster, Central Snaefell, and East Snaefell shares. 10

MESSRS. WILSON, WARD, AND CO., STOCK AND SHAREDEALERS, 16, UNION COURT, OLD BROAD STREET, LONDON, E.C. Can recommend two good mines for investment. 16

MR. WILLIAM SEWARD, STOCK AND SHAREDEALER, 19, THROGMORTON STREET, LONDON, E.C. 11

MR. WILLIAM MICHELL, STOCK AND SHAREDEALER, 42, CORNHILL, LONDON, E.C.

EAST RUSSELL AND ITS MANAGEMENT.—Scurrility or sarcasm is not argument. Being the largest shareholder in this mine, I have a perfect right to question and complain if I consider the management is not what it should be; and have not waited until now for Mr. Gompers, or any one who writes for him, to tell me that mining machinery is liable to get out of work, and that accidents will happen. This I also know: Many of the accidents that do occur in the mines can be prevented by careful and watchful management, and that it does not take a whole mine of men to throw the machinery out of gear, but can easily be done by one man alone, if so disposed. Very few men have had more to do with mining machinery than I have, and I have a perfect knowledge of their movements, from the windbore in the bottom of the shaft to the top steam-valve of the engine, as well as the exploration of hard and soft ground; and, of those who are well acquainted with such work, I would ask what agent in his common senses would stop the engine to repair the boiler directly he had cut the slide, knowing the covering of which by water would endanger his level, and lessen the probability of his getting through the slide without a serious accident, occasioning considerable delay and expense? Why was the boiler not repaired before the slide was cut? or, if the boiler had gone suddenly bad, why was not the level driven through the slide into firm ground, the soft ground timbered and made secure, before repairing the boiler? And what agent, who had the shareholders' interest at heart, would have incurred the risk of crushing the levels together, by allowing the water to be *let into* ("I thank thee, ***, for that word!") the mine, to repair a boiler, when he was hundreds of miles away? Before the mine could be got perfectly clear of the water from this stoppage, a reported accident took place of an unusual occurrence. "By some *unknown* means, the air-pump bucket-rod got bent"—a perfectly safe part of the engine when carefully looked after. No attempt has been made to explain this accident. The water was no sooner got out of the mine from the second stoppage than a third took place to change the "pole-case." Now, why was not advantage taken of the stoppage of the engine to repair the boiler, to change the pole-case, or when the air-pump bucket-rod was being repaired, and thereby prevent one or more of the stoppages—all of which tended to weaken and crush the soft ground about the slide, until at last it was rendered impossible to get through without diverting the level from the line of the lode into firmer ground until the opposite side had been reached. To say the least of it, there seems a great want of foresight and generalship. That the 140 fm. level could not have been driven through the slide without so much difficulty I cannot believe, and I am in great measure borne out in that opinion by their having sunk a winze through from the 130 to the 140 (which passed through the slide about 2 or 3 fms. above the back of the 140), without the slightest difficulty before the water was let in. I can assure Mr. Gompers that I neither want the agency of this or any other mine for relative or friend, they not being mining captains. All I want is the mine carefully watched and economically worked, when it is immaterial to me who is the manager or agent.

Money advanced on Mining Shares.

April 18, 1867. Apply to WILLIAM MICHELL, 42, Cornhill, London, E.C. Bankers: London Joint-Stock and National Provincial of England. 12

MR. GEORGE BUDGE, STOCK AND SHAREDEALER, No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 20 years), has FOR SALE at nett prices:—25 Hollybush Coal (£3 paid), 35s.; 65 Okel Tor, 23s. 6d.; 40 Rose and Chiverton United; 15 Great Retallack, £3⅝; 5 West St. Ives; 50 Pendeen, 17s.; 150 Don Pedro; 200 Anglo-Brazilian, 12s.; 50 East Grenville, £2½; 40 East Rosewarne, 8s. 6d.; 3 West Chiverton, £73¼; West Kitty; 80 East Russell, £3 1s. 6d.; 20 Bedford United; 50 Great South Tolgus, 7s.; 60 Redmoor, 6s. 6d.; 120 Tolcarne, 5s. 6d.; 50 Central Minera, 7s. 6d.; North Retallack, £2½; 100 South Grenville, 6s.; 30 Wheal Uny, 33s.; 45 Drake Walls, 6s. 6d.; 150 Gothic; 70 Crebor, 11s.; 35 South Callington; 120 Penrydyr Park, 2s.; 60 West Drake Walls, 7s. 6d.; 50 Llanfair Slate, 25s. SPECIAL BUSINESS in Rose and Chiverton United, Chiverton Moor, Minera, Okel Tor, Frank Mills, Anglo-Brazilian, United Mexican, Devon Great Consols, and North Chiverton. 13

PETER WATSON'S "WEEKLY MINING CIRCULAR AND SHARE LIST—SYNOPSIS OF CORNISH AND DEVON MINES," of Thursday, April 18, No. 420, Vol. IX., price 6d. each copy, forwarded on application, contains information on the following mines:—

North Wheal Chiverton.	West Great Work.	Wheal Seton.
West Chiverton.	Great Wheal Vor.	Wheal Kitty.
Chiverton Moor.	Bryn Gwiog.	Cook's Kitchen.
North Wheal Crofty.	Cobre Copper.	Wheal Uny.
East Wheal Lovell.	Chontales.	Dolcoath.

And remarks on the Tin Trade and an advance in the Copper Standard. PETER WATSON, Stock and Sharedealer, 79, Old Broad-street, London, E.C. 14

STOCK AND SHAREDEALER.—MR. PETER WATSON ENGLISH and FOREIGN STOCK, SHARE, and MINING OFFICES, 79 OLD BROAD STREET, LONDON, E.C.

Railway, Joint-Stock Banks, Dock, Insurance, Canal, Mining, Steam-ship, &c., and every other description of shares bought and sold at nett prices.

TELEGRAPHIC MESSAGES to BUY or SELL Railway, Bank, Mine, and other shares and stocks, punctually attended to, at nett prices for cash, or for fortnightly settlements, with advice as to purchases or sales.

Twenty-two years' experience.

(Two in Cornwall and Twenty in London.)

Bankers: The Alliance Bank, and the Union Bank of London. 15

From the close proximity of his offices to the Stock Exchange, as well as the Mining Exchange, PETER WATSON is enabled to act with promptitude on all orders entrusted to him, which at all times are carried out with punctuality, and to the best advantage of his clients.

NORTH WHEAL CHIVERTON SILVER-LEAD MINE.—A very large number of shares have been applied for, and according to the priority of application an equitable distribution has been made. I cannot too strongly advise an immediate purchase of these shares, as I believe they will quickly attain a very high price in the market, inasmuch as the mine in its present state of development presents prospects very little inferior to those presented in West Chiverton at a similar depth. EDWARD COOKE, 76, Old Broad-street, E.C. 16

MR. EDWARD COOKE, STOCK AND SHAREDEALER, 76, OLD BROAD STREET, LONDON, E.C. Has SPECIAL BUSINESS in Chontales, Prince of Wales, East Lovell, Frank Mills, South Darren, West Caradon, Prosper United, and North Crofty. Stock Exchange securities dealt in at close market prices. Satisfactory references given in any town in the United Kingdom. Bankers: Alliance Bank. 17

MESSRS. POWELL AND MOSS, SHAREDEALERS, 78, OLD BROAD STREET, LONDON, E.C. Members of the Mining Exchange. Bankers: Bank of England. 18

MR. JAMES HUME, 74, OLD BROAD STREET, MEMBER OF THE MINING EXCHANGE. Transacts buying and selling orders at nett prices, equivalent to 1¼ per cent. commission.

A BUYER of East Russell, Prince of Wales, Chiverton Moor, Uny, South Condurrow, East Basset, Great Vor, East Carn Brea, &c.

Mr. J. HUME'S "Circular" for this month is now ready, and ought to be perused by all interested in mines, and by all intending investors.—6d. per copy, or 5s. annual subscription. Bankers: The London Joint Stock Bank. 19

JAMES D. GENN AND CO., STOCK AND SHAREDEALERS, 3, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C. 20

BARTLETT AND CHAPMAN, STOCK AND SHAREDEALERS, 2, BUCKLERSBURY, LONDON, E.C. Business transacted in every description of stocks and shares at lowest market prices, free of commission.

All communications will receive immediate attention, either personally or by letter. Bankers: London and Westminster. 21

GREAT SOUTH CHIVERTON MINE.—BARTLETT AND CHAPMAN recommend the PURCHASE of these SHARES for PERMANENT HOLDING. £100 or £200 invested in this property cannot fail to prove highly remunerative.

Further particulars, with plans of the district, can be obtained on application to BARTLETT and CHAPMAN, No. 2, Bucklersbury, London, E.C. 22

THE INVESTMENT CIRCULAR AND FINANCIAL RECORD for APRIL, published by BARTLETT and CHAPMAN, No. 2, BUCKLERSBURY, LONDON, E.C., should be consulted by all intending Purchasers of Mining or other Stock. Forwarded gratis and post free, on application. 23

MR. WILLIAM MARLBOROUGH, 1, GREAT ST. HELEN'S, BISHOPSGATE STREET, LONDON, E.C. (Established 12 years), has FOR SALE the FOLLOWING SHARES, at nett prices:—

20 Marke Valley, £4 6 3	60 Prince of Wales, 53s.	30 Rosewall Hill, 37s.
40 South Darren, 20s. 6d	1 Wheal Seton, £100.	80 Frontino, 4s.
5 W. Chiverton, £72½.	5 South Frances, £17½.	5 Great Vor, £18½.
50 Chontales, £2 13s. 9d.	20 North Crofty, £4 13 9	25 Okel Tor, 22s. 9d.
20 E. Carn Brea, £2 16s.	5 Carn Brea, £10½.	20 East Caradon, £5⅞.
15 East Lovell, £8 8s. 9d.	40 Prosper Unit., £3 3s.	25 Wheal Uny, 34s.
10 Chiverton, £6½.	60 North Downs, 7s. 6d.	50 W. Drake Walls, 6s 9d
20 No. Treskerby, 37s. 6d	5 East Basset, £17¼.	20 East Russell, £2 18s.
35 East Grenville, 52s.	40 So. Condurrow, 13s 3d	10 Clifford, £5½.
15 Stray Park, 35s.	25 Gt. Retallack, £3 8 9	30 CarnCamborne, 17s 6d
30 East Snaefell, 21s.	15 Great Fortune, 38s 9d	5 Herodsfoot, £34½.
45 Drake Walls, 9s. 3d.	50 Bottle Hill, 3s. 9d.	20 Wh. Grenville, 20s. 6d
50 Crebor, 9s. 3d.	25 Chiv. Moor, £5 18s. 9d.	50 Caldbeck Fells, 13s.
30 Frank Mills, 25s. 3d.	5 West Frances, £11¼.	80 Redmoor, 5s. 9d.
50 Gt. No. Laxey, 24s. 6d	5 South Crofty, £18¾.	35 Wheal Agar, 20s. 6d
15 Gt. No. Downs, £4 1 3	5 Wh. Mary Ann, £13⅜	5 North Roskear, £6¾.
50 Gt.So.Chiverton, 5s 3d	25 Lovell Consols, 60s.	30 E. Rosewarne, 10s 3d

MR. T. ROSEWARNE, 81, OLD BROAD STREET, has BUSINESS, at close market prices, as BUYER or SELLER, in—

*Bedford United.	North Treskerby.	Caldbeck Fells.
North Crofty.	West Chiverton.	Rosewall Hill.
*East Russell.	*West Caradon.	Devon Consols.
*Wheal Seton.	*Great Retallack.	East Basset.
*South Grenville.	Great North Downs.	Great Vor.
Prosper United.	*Drake Walls.	South Condurrow.
East Grenville.	Great North Laxey.	Chiverton Moor.

T. ROSEWARNE is a BUYER of any part of 2000 Okel Tor, at market prices. Special information given on this mine, also on shares marked thus *.

T. ROSEWARNE is a SELLER of East Russell, for time on, below market prices.

PRINCE OF WALES.—The reports this week are most satisfactory. The mine never looked better than at the present, which will be shown by the dividends which will be paid. I say again to all my friends increase your interest, and bear in mind that the north lode is yet to be cut, and when cut it is likely to prove as valuable as the one now working upon.

An OFFER WANTED for National Provincial Marine shares. Money advanced on mining shares. Bankers: Bank of England and Consolidated. 25

MESSRS. J. TAYLOR AND CO., MINING AGENTS AND SHAREDEALERS, 17, CROSS STREET, MANCHESTER, have FOR SALE:—

20 Silver Brook, £5 per share.	50 North Downs,	50 Great East Lovell.
	30 Cashwell.	20 Prince of Wales.
		10 W. Great St. George.

J. TAYLOR and Co. strongly recommend the immediate purchase of Great Mona shares, which must soon command a good premium. 24

INVESTMENT, LOAN, AND BANK AGENCY, Established 1839. BANKERS—London and County Bank.

Purchases and Sales of British and Foreign Stocks and Shares negotiated upon advantageous terms.

A record of the facts affecting the values of the various leading Public Securities is kept for the guidance of Investors who may be desirous of consulting this Agency with reference to the Investment of Capital, or the exchange of their Securities.

Loans granted for short or long periods on Stocks and Shares having a market value.

Deposits received in large or small sums at the following rates:—

Repayable at three months' notice ..... 5 per cent. per annum.
Ditto one ditto ..... 4 ditto

Bank and Money Agency Business generally undertaken.

CHARLES PETTS, Secretary. No. 19, Clement's-lane, Lombard-street, London, E.C. 27

MR. CHARLES THOMAS, MINING AGENT, GENERAL SHAREDEALER, AND AUCTIONEER, 3, GREAT ST. HELEN'S, LONDON, E.C. 28

MR. T. E. W. THOMAS, MINING AGENT AND GENERAL MINING SHAREDEALER, UNION CHAMBERS, UNION COURT, OLD BROAD STREET, LONDON, E.C. 29

MESSRS. LANE AND GIBBS, 2, ROYAL EXCHANGE, LONDON, E.C. (Members of the Mining Exchange), STOCK AND SHAREDEALERS, AND FINANCIAL AGENTS, transact business in all kinds of securities at closest nett prices for cash or account.

Parties of respectability can have transfers registered in their names previous to payment. Daily price list on application. Bankers: London and County Bank. 30

SAFE INVESTMENTS FOR CAPITAL, Paying 5 to 20 per cent. per annum upon the outlay. SHAREHOLDERS, CAPITALISTS, TRUSTEES, and INVESTORS seeking valuable and reliable information, and requiring safe, sound, and profitable investments, should at all times consult SHARP'S GENERAL INVESTMENT CIRCULAR (Post free). It is a safe guide, giving every information to shareholders and capitalists. GRANVILLE SHARP, STOCK & SHAREDEALER, 32, POULTRY, LONDON. 31

MR. JOHN B. REYNOLDS, OFFICES, 70 and 71, BISHOPSGATE STREET WITHIN, LONDON, E.C.

Business transacted in British and Foreign Stocks, Railway, Bank, Insurance, Financial, or Mining Companies Shares, and all Miscellaneous Securities, at the lowest market quotations.

Exchanges effected and purchasers found for shares not generally marketable. All communications from clients are treated as strictly in confidence. Telegrams promptly attended to. Established Ten Years. Bankers: City Bank. 32

WEST ST. IVES.—The attention of Capitalists is particularly directed to the merits of this property. I have SPECIAL BUSINESS in these shares, both as BUYER and SELLER, and am prepared to furnish a copy of Capt. Pope's report to any applicant, together with copies of subsequent report, on receipt of stamps, 2s. 6d. J. B. REYNOLDS, 70 and 71, Bishopsgate-street, London, E.C. 33

ROSE AND CHIVERTON UNITED.—A ground plan and section are now on view at the offices of the company, as well as a special report of Capt. Hancock, of Polberro. Both of these can be inspected on application, and copies of his report, and another special report, be forwarded on receipt of stamps value 2s. 6d. J. B. REYNOLDS. 70 and 71, Bishopsgate-street Within, London. 34

JOHN RISLEY, STOCK AND SHAREBROKER (SWORN BROKER), 32, LOMBARD STREET, LONDON, E.C. BUSINESS TRANSACTED in EVERY DESCRIPTION of STOCKS and SHARES, on commission only. Bankers: London and Westminster, Lothbury. 35

MATTHEW GREENE, STOCK AND SHAREDEALER, ST. MICHAEL'S HOUSE, CORNHILL, LONDON, E.C.

MATTHEW GREENE is always prepared to deal at close prices in Stock Exchange securities and mining shares, and has FOR SALE the FOLLOWING SHARES, nett and free of commission:—

50 Chontales, £2½.	5 Great Retallack, £2⅞	10 West Caradon, £8 7 6
10 Clifford, £5 18s. 9d.	20 No. Treskerby, £1 18 9	20 Grenville, 19s. 6d.
15 E. Grenville, £2½.	10 North Crofty, £4¼.	1 Seton, £103.
10 Gt. No. Downs, £3¾.	50 Prince of Wales, 56s.	50 East Snaefell.

Bankers: Messrs. Ransomes, Bouverie, Pall Mall, and Imperial Bank, City. A daily list of prices post free on application. 36

MR. R. EMERSON, 28, GREAT WINCHESTER STREET, LONDON, E.C., is a BUYER or SELLER of Great Laxey, Great Wheal Vor, Wheal Alice Alfred, St. Ives Consols, West St. Ives, Providence, Budnick Consols, and Rose and Chiverton United. Eighteen years' experience in Cornwall and thirteen in London. 37

MR. EDWARD BREWIS TRANSACTS BUSINESS at net prices. Intending investors should apply at once. There never was a better time to buy good things cheap, and caution required to sell so-called rotten schemes.

Clients' business telegrams promptly attended to. THREE MINES TO ADVANCE, PARTICULARS GRATIS. 8, Warnford-court, Bank, E.C., London. 38

MR. G. D. SANDY, STOCK AND SHAREDEALER, No. 48, THREADNEEDLE STREET, LONDON, E.C., TRANSACTS BUSINESS in EVERY DESCRIPTION of STOCK EXCHANGE SECURITIES, MINING and FINANCIAL ENTERPRISES, at close market prices.

BUYER of Rosewarne Consols.

BUSINESS in Bottle Hill, East Bottle Hill, New Lovell, Grambler and St. Aubyn, Drake Walls, West Drake Walls, Great North Downs, Wheal Uny, and South Grenville.

Correct Daily Price List may be had on application. Money advanced to any amount on legitimate stocks and shares. References exchanged. 39

TINN AND FRYAR, CIVIL AND MINING ENGINEERS, AND CONTRACTORS, ROYAL INSURANCE BUILDINGS, CORN STREET, BRISTOL. 40

MESSRS. FREDERIC GILL AND CO., STOCK AND SHAREDEALERS, ST. CLEMENT'S HOUSE, CLEMENT'S LANE, LONDON, E.C., TRANSACT BUSINESS in all MINING STOCKS and SHARES at closest market nett prices, either for cash or account. Cheques crossed City Bank. 41

WALTER TREGELLAS, 122, BISHOPSGATE STREET WITHIN, E.C., DEALS in ALL KINDS of *bona fide* STOCKS and SHARES, and BRITISH and FOREIGN MINES, either for cash or the fortnightly settlement at close prices.

Recommends the purchase of Don Pedro North del Rey, Anglo-Brazilian, East Caradon, South Crofty, West Frances, West Tolgus, Chiverton Moor, Camborne Vean, West Chiverton, and Great Vor.

BUSINESS in Frontino and Bolivia shares as BUYER or SELLER. Bankers: Alliance Bank. 42

GEORGE RICE, STOCK AND SHAREDEALER, 78, OLD BROAD STREET, LONDON, E.C. (Member of the Mining Exchange), (25 years' experience), TRANSACTS BUSINESS in MINING SHARES, at close prices.

SPECIAL BUSINESS in Chiverton Moor, East Lovell, Great Vor, North Crofty, West Chiverton, and Prince of Wales.

Money advanced on mining shares. April 18, 1867. Bankers: Bank of England. 43

WANTED IMMEDIATELY, AN OFFER FOR—

10 WEST GREAT ST. GEORGE.	10 WEST WHEAL KITTY.
10 WEST ST. IVES.	85 EAST BOTTLE HILL.

Address, "Trustee," MINING JOURNAL Office, 26, Fleet-street, London, E.C. 44

ROBERT LIBBY AND SON, MINE AND SHAREDEALERS, CAMBORNE, CORNWALL. 45

JAMES SCOTT AND CO., STOCK AND SHAREDEALER, 1, PINNER'S COURT, OLD BROAD STREET, LONDON, E.C.

All Stock Exchange securities dealt in at close market prices for cash or the bi-monthly settlement. References given to any town in the United Kingdom.

JAMES SCOTT and Co. have SPECIAL BUSINESS in the following MINE SHARES:—East and West Caradon, East Lovell, East Wheal Russell, North Crofty, Frank Mills, Drake Walls, Prosper United, Prince of Wales, Great South Tolgus, Chontales, and Frontino and Bolivia. 46

NOTICE.—CAPT. S. M. RIDGE, of LLANIDLOES, MONTGOMERYSHIRE (late manager of the Brynpastig and Cwm Froa Mines, and others, in Shropshire and Wales), is NOW OPEN to INSPECT and faithfully REPORT UPON ANY LEAD MINE in either of these localities that may be confided to his care, having had better than 30 years' experience in lead mining, as miner and agent.—Address, Capt. S. M. RIDGE, Llanidloes, Montgomeryshire. 47

Original Correspondence.

AN IMPROVEMENT IN COLLIERY VENTILATION.

GIVE HONOUR WHERE HONOUR IS DUE.

Sir,—As the subject of colliery ventilation is one of vast importance, the management of our coal mines ought to be in the hands of sober, careful, and intelligent men. It is some time since the Inspector for this district found it necessary to stop one part of a large mine, belonging to Messrs. Pilkington, on account of it giving off a very large quantity of explosive gas, and the workmen's lamps were, therefore, unsafe to work with. The ventilation was miserable in the extreme, as it was conducted on a wrong principle—throwing the body of gas on to the men instead of taking it from them. This, then, was the real danger. Some few months ago Messrs. Pilkington engaged Mr. W. Hopton, who wrote the "Conversation on Mines between Father and Son," and another gentleman, Mr. Francis, to conduct the underground workings (they both belong to St. Helen's, in Lancashire). Mr. Hopton very soon gave instructions for some alteration in the ventilation. Having improved the main return airway, he next proceeded to divide the current into so many separate divisions, thus giving each level or brow a current of pure air to itself, which had the natural effect of clearing the places of gas, and keeping it from the men; and instead of the lamps being in danger, the men can now with perfect safety work with naked lights.

Mr. Hopton, after years of anxious exertion, has won for himself in this district a name of honour, trust, and deep respect among all classes of society, by making the mines safe where our miners have to earn their bread. Now, Sir, if the Government should call for sub-Inspectors, I think Mr. William Hopton ought to be nominated for this district, believing in such a position he would not fail to take his place among the intelligent and honourable practical mining engineers of this country. His manly and careful exertion in making peace and creating good feeling between masters and men also gives him a place among the nobles of our land; and the wonderful change for the better he has made in Messrs. Pilkington's large colliery will, perhaps, save them thousands of pounds and many a poor miner's life.—*St. Helen's, Lancashire, April* 15. Edward A. Rymer,
Miners' agent.

COAL-CUTTING MACHINERY.

Sir,—Reference was made some short time since to the offer of the Lancashire and Cheshire Coalowners' Association of prizes for the best coal-cutting machine, yet I have not seen any statement to the effect that any new arrangement has been introduced. The committee appointed to adjudicate upon the subject are gentlemen upon whose judgment no doubt whatever can exist—Messrs. Evans, Gilroy, Greenwell, Hewlett, Holland, Knowles, Lancaster, and Fereday Smith, being all intimately connected with collieries and their management, and thoroughly able to appreciate the value of any invention that may be submitted to them. It will be remembered that the committee have already decided that compressed air is the motive-power to be used, and have stated the minimum thickness of the seams in which it is required to work. From these particulars it is not difficult to conclude what kind of machine is likely to give satisfaction. With regard to the terms offered, it is obvious that although certain rights are to be reserved to members, the payment which the association secures to the inventor is quite as large as he could hope to receive otherwise.

That the inventors of Great Britain are competent to produce a machine which will meet the requirements of the coal owners I have no doubt, more especially if all the conditions of the seams, &c., be kept well in mind. A machine capable of working with compressed air, and of cutting at any angle from horizontal to 20° is essential, whilst its size should not exceed 3 ft. and 2 ft. 6 in. in vertical section, including the wheels, and 3 feet long. These dimensions give ample scope to the inventor, for really many small horizontal engines employed in general work do not exceed the size required to meet these conditions. But it appears to me that too little attention is given to the character of the blow, most of the machines I have yet seen being much like the blow one would use to reduce a substance to an impalpable powder, although crushed coal is what colliery proprietors least desire. We must have a sharp, but light, pick-up blow that will displace the coal without pounding it, this being the sort of blow that a good coal hewer always gives.

The advantages which would result from the winning of the prize offered by the Lancashire and Cheshire Coal Association can scarcely be estimated, for it would at once brand the machine as one of acknowledged practical utility, whilst the circumstance of the association not binding themselves to try whatever machine may be submitted to them will cause a certain amount of credit to attach to all that may be tested. As the trials are to take place in November, it is necessary that inventors should be stirring; and, as the value of the prizes will increase in proportion to the number of competitors, I trust that there will be a large attendance. I believe that I shall be able to show a machine, not more than 2 feet square and 3 feet long, that will cut coal better than any yet introduced, and not make more small than a good workman. The whole of the working parts are entirely beyond the reach of injury from the vibration of the pick. I should, however, like to know the weight which it is most desirable to give the machine, for whilst the committee ask for lightness it is my opinion that the machine, if compact, is better for being heavy, as it would increase its stability. Perhaps the committee would state what is the maximum weight per cubic foot they would admit?
April 18. An Inventor.

TRADES UNIONS, AND WORKMEN'S WAGES.

Sir,—I have read with much interest the report in last week's Journal of the evidence taken before the Royal Commission on the Trades Unions, and cannot help thinking that it will do much to shake the confidence of all honest workmen in the integrity of the delegates of Trades Unions generally. Thus, Mr. George Potter states that he is aware, as a practical workman, that "there are different degrees of work, and that a skilled artizan would not be so profitable to his employer in laying a floor, or doing rough work, as in making sashes and doors;" yet he admits that the advocates of Trades Unions "hold that every man in the society is worth the standard rate of wages fixed by the society." Now, the publication of such statements as these is calculated to do immense injury to the working men as a body, by making all alike careless, and by lowering the social position of the workmen. If we are to believe Mr. George Potter we must admit that the workman who strives to become more clever in his trade than his fellows is *not* entitled to any reward for doing so, and that all should be lowered to one standard. Now, I like to get more money for my day's work as well as any man, but I do not see that because I earn 10s. a-day, and another at the same work earns only 5s., that there is any justice in paying us both 7s. 6d. a-day; and no one whose work is *above* the average is likely to see it. There can be no justice in paying men, except in exceptional cases, upon any other system than piece-work.

But what does Mr. William Allan, the secretary of the Amalgamated Society of Engineers, say about piecework? "We have a decided objection to piecework, and if a man persists in doing it we expel him from the society." Mr. Allan believes that piecework has a tendency to injure the trade and reduce wages, yet he admits that the rate of wages is not really and permanently lower where piecework prevails than where it does not, and he mentions, as a proof of that fact, that "in Manchester the wages are higher than in any other part of the district, and there piecework exists to a very considerable extent." As to Mr. Allan's assertion that the work done is inferior where piecework prevails, I do not believe it to be true in any case, as a consequence of piecework, and I know of many instances where the work done by the piece is much better than day work. But I do really think that there are many particular parts of certain trades which cannot be done with justice, and at the same time allow a man to earn a fair day's pay—work that occupies no fixed time in doing, such as the voicing of an organ-pipe or the finishing of a watch, and there are some of this kind of work in every trade. For this I would make a very simple arrangement. Where from the nature of the work it is unlikely that proper wages could be earned, it should be mutually agreed between the men and the masters that such work should be done by men paid by the day, and the day wage in that case should not be less than the average earned in the same number of hours by the men on the piece. In a large factory, employing (say) 500 men, a dozen day-work men would be ample, and it might even be arranged, if necessary, for the men to take it in rotation to do the day-work. By this means both masters and men would derive benefit, for the finished work would be turned out in the best possible manner, and nearly all the workmen would be paid according to their merit. Where the day-work is of a higher class than that of the piecework, it could be paid at a higher rate, and the piece hands would have the prospect of being made day hands, as a reward for displaying greater skill than their fellows.

It is to be hoped that the Trades Union Commission will bring out all the facts, both for and against Trades Unions, and especially against the payment—good, bad, and indifferent—according to one uniform scale per day, although if all men are paid the same per piece, with the proviso that deductions shall be made when the work is below the standard, I do not see that any injustice could arise.
A Non-Unionist.

NEW CHINA-CLAY DISTRICT—NORTH WALES.

Sir,—In an article which appeared under the above heading, in the *Mining Journal* of last week, there are some remarks in connection with my name somewhat calculated to mislead, and consequently require a brief explanation on my part. The purport of the writer would appear to be to impart an impression that I had recently given a description of the mineral character of the property for an especial occasion, whereas the observations quoted on the material in question are obviously abstracts from the last of a series of elaborate articles which I published in the *Mining Journal* in the autumn of 1849, "On the Social Condition, Agricultural Capacities, Geological Structure, and Mineral Resources of the Principality of Wales." From that distant period I have not written a line on the subject adverted to (and certainly never as a report). All that I said upon it then is contained in the following extract:—"In the wild Basaltic region, to the south-west of the Vale of Festiniog, and five miles from Harlech, is the romantic lake Cwm Bychan, which merits a place in this partial enumeration of natural products, from the circumstance of a very peculiar deposit of pure snow-white earth being recently found to cover the entire bottom of the lake to a depth of many feet. It is found on analysis to be composed of silica and magnesia, is said to possesss the properties of kaolin or porclean clay; forms an excellent base for pigments, imparts the highest polish to metallic substances, and is believed to be very generally applicable to the arts and manufactures. The lake is closely surrounded by a magnificent amphitheatre of trap-rocks." From the singular character of this clayey or sedimentary deposition, as alluded to above, I was induced to send a sample of it to Prof. Flageolet, of Paris, for an analytic examination, and from whom I duly received the analysis and brief notice of its probable adaptative qualities, as substantially copied into the article inserted in the Journal of last week. Although it is about 18 years since I obtained that document from the Parisian professor, I am strongly impressed with a belief that I then gave a copy of it to a gentleman residing in the district referred to, and who would appear to have treasured it up, with a view to some such enterprise as the one now signified being eventually brought to bear practically on the peculiar products of the mountain lake of Cwm Bychan.
Joseph Holdsworth.

CHINA-CLAY IN NORTH WALES.

Sir,—Having noticed your insertion of some account of my china-clay at Cwm Bychan, near Harlech, North Wales, in last week's Journal, I shall esteem as a favour your kindly publishing in the next edition the following advantages of that recently-discovered extensive deposit:—

1.—There is no bed of the earth's crust to uncover in order to get at the clay, as that of Cornwall, our clay being only a trifle discoloured by the water of not half-an-inch covering.

2.—No reduction of the product by washing out the soft granite, which, from what I examined at St. Austell, would reduce the product about one-third, our Welsh clay being wholly decomposed.

3.—The Cornish clay is dried with coal, at great expense, while our Welsh clay is dried with peat obtained in the land for a mere trifle in working it.

4.—The shipping-port of Cornwall being a great distance, there is large expense of carriage. Our Welsh shipping-port, with extensive wharf, and railway-station adjoin each other, at easy distance from Cwn Bychan.

5.—At our shipping-port (Pensarn) vessels up to 300 tons discharge large quantities of coal monthly from Runcorn, near Liverpool, which place (Runcorn) is the leading position of discharge of the French and Cornish clay for the Manchester, Lancashire, and other districts, as bleaching-powder. Notwithstanding vessels trading, coupled with the other vessels discharging at Pensarn, they are glad to get return cargoes to Runcorn at only a few shillings per ton freight. Again, our railway (Welsh Coast), which is expected to open daily, will only take eight hours from Pensarn to Manchester, and less to the Staffordshire Potteries—so that we shall have great advantage of time in transit.

Comparing these advantages, coupled with the small cost of making our Welch china-clay merchantable, it would appear to render a large beneficial and commercial trade in the district of Cwm Bychan, and thereby lessen the Cornish supplies, which appears, by returns made, now to export about 85,000 tons of china-clay per annum, employing no less than 7000 persons. S. J. Hennis.
Harlech, North Wales.

THE SNOWDON SLATE QUARRIES COMPANY (LIMITED).

DR. BOWER, D.C.L., AND MR. THOMAS HARVEY.

Sir,—In the *Mining Journal* of March 23 a letter appeared, signed "Snowdon," obviously written for the purpose of making, by cowardly inuendo, a gratuitous and wholly unprovoked attack on myself, which the writer had not the courage or honour to do above his proper signature. No writer is justified in introducing personal matters into a letter, unless he gives evidence of his sincerity by the voucher of his name. In the interest of the *Mining Journal* itself, and of every other respectable newspaper, I protest against such a misuse and abuse of their columns, as by the publication of anonymous attacks on persons. Were it not for the high respectability, in many cases, of the medium of publication, the things themselves would richly merit the contempt of silence.

I answered this wanton attack on me in my letter published in the Journal on the 6th inst., and having therein exposed the ignorance and arrogance of "Snowdon," I left that pretender as food for mirth for all the country "round about" him.

In the Notices to Correspondents, in the Journal of March 30, it was stated, "pressure on our space compels us to postpone the letters of 'Snowdon,' Mr. Thomas Harvey, and 'Observer.'" "Snowdon" had, therefore, written a second letter, which was in your hands at the same time with mine, which appeared on the 6th inst. What has prevented the appearance of that letter, or any other letter, from "Snowdon," since my reply appeared? We shall probable see. The Journal no longer contains a special, or any communication, from the lofty, but cloud-be-fogged, head of "Snowdon," who overlooks "even the present Fenian country of Ireland," as he informed you. Perhaps the post does not reach him up there till the tourist days come round, in June, and your paper may now be lying at his foot in the "Snowdon Ranger" post office, and my letter be to him, all the time, a "dead letter." However, it is a good thing to have a friend in the mountains, or may be in the valleys, where all the frightened goats may probably have run to, to answer your letters for you, if you do not get them, and to take a warm interest in yourself and all your relations. Such a friend "Snowdon," in his enforced absence from your columns has found in the person of (to be particular, I will take the gentleman's own description of himself from an advertisement in your immortal Journal) "John Bower, D.C.L., Oxon., Barrister-at-Law, who has been for nine years manager and director of the Snowdon Slate Quarries Company (Limited), and who is prepared to inspect and report on any quarry or slate vein in North Wales, and whose report would include every fact favourable or unfavourable." How wonderfully this sounds like the trumpet from the "everlasting hill." Such a redoubtable champion and disinterested friend "Snowdon" seems to have, and "so like the one to t'other" as to make it difficult to detect which is the real "Snowdon" and which the sham. But what about the missing letter of "Snowdon," which was in your hands on March 30, to be published, as might be inferred, on April 6, but which had not appeared up to the 13th?

You could tell me a little secret, if you would, about the real "Snowdon," but you editors are so reticent that I know beforehand you will not, if you can help it. But there are means of squeezing acts even out of editors, under certain circumstances; and if necessary, in the interest of truth and honour, the squeeze must come. May I take the liberty, the, it may be, very great liberty, of asking you whether "Snowdon" and Dr. Bower, D.C.L., are brothers? Why, "Snowdon" came out as "the everlasting hill," and as the highest authority in Wales, and "strictly impartial between Cwmraeg and Sassenach, investor and speculator, promoter and shareholder, pure slate vein and bastard rock," and all that; and now, in one short fortnight, he has melted away and disappeared, or his brimstone may have caught fire, and burnt him up; and, in his place, up starts an uninvited substitute and champion, with whom I am suddenly called upon to do battle on a false issue. No, no; this will not do. Dr. Bower's feelings may be hurt on account of *his friend*, "Snowdon," no doubt, but he must not ride off on a false plea, notwithstanding, and pretend that some one has libelled him or his quarries. We call that sometimes throwing dust in our eyes, but he must not do that. It may be very ingenious to try to draw off the attention from unpleasant facts by getting up this little "make-believe;" but I am not going to be deluded in that way, and I decline to be made the instrument of puffing off Dr. Bower's quarry by allowing him to assume the grandiloquent tone, and, under the disguise of an injured and complaining individual, to palm off upon the public an advertisement of his quarries, which he could not otherwise invent a legitimate excuse for publishing. That is clearly the object of his letter in your Journal of to-day, and I repudiate the entire scheme. I know nothing of his quarries. I never saw them, and certainly have had nothing whatever to say about them, and decline to enter into their merits or demerits, or even to read the small print in his letter which I presume describes their excellencies.

I replied, to "Snowdon," the pretender, who does not again show his head. I did not invite Dr. Bower to come among the brimstone and ashes; that's his own choice, and he had better take care that he does not get burnt. I think Dr. Bower ought to apologise to me for quoting only part of my letter, for his friends might like to see the whole of what he calls a "libel on the Snowdon Slate Quarries Company (Limited);" and, in return for his kind invitation to me to play the fool, I beg to offer him, for the gratification of his friends, 50 copies of my letter, printed on convenient slips, which he shall have at any time by applying for them.

Dr. Bower will not inform the public in what relation he stands to "Snowdon." He concludes his letter with this prudent resolve—"I decline to answer any letter Mr. Harvey may write to you in reply to this." Your readers will put their own construction on this contemplated retreat. It is not exactly English, and I am certain it is not a fair specimen of Welch pluck; but, such as it is, you must please take it, for better or worse, for it is the declaration of an advertising barrister-at-law, and a D.C.L. Thomas Harvey.
33, *King-street, Cheapside, April* 13.

SLATE QUARRYING IN WALES.

Sir,—From the tenor of Dr. Bower's letter, in last week's Journal, one would infer that the Snowdon Slate Quarries (of which he styles himself the manager) was on the Cambrian or Bangor slate range, and more especially as he quotes the opinion of "A Man of Experience" as to the North Wales slate deposit. True, these deposits may be termed in and around the neighbourhood of Snowdon, but the nearest points are the Llanberis Quarries and those opened at Nant-y-Bettws. Taking a line from the latter point to the Snowdon Quarries, there is a distance of 2½ or 3 miles. The strata from this point and around Snowdon consist of greenstone, dykes, blue and brownish sandstones, slaty and sandy beds, small veins of dark slate, calcareous and sandy felspathic ash, quartz, porphyry, and syenite, and is generally classed as the Lower Silurian; therefore, it is evident that, from the various classes of strata, slates do not exist in any quantities in the immediate neighbourhood of Snowdon.

There are a few small veins on the south of the Cambrian range; the first passing at the back and near the Lingula beds; on the east the outcrop is to be found in the neighbourhood of Aber, passing Moel Wnion; the south of the Penrhyn and Llanberis Quarries, Allt Llan, thence to the north end of Llyn Cwellyn.

The other veins are to be found on the east in the Conway district, to Cwm Eigia, Nant Francan, the Pass of Llanberis, in the neighbourhood of Clogwyn Coch, the south of the summit of Snowdon, the Llewedd Mountain, and near Cwmllan. These are the small veins found about Rhyddu and the Snowdon Slate Quarries. These veins throughout are highly impregnated with iron, giving them the singular dark colour; consequently, are classed as ferruginous. The slates are only marketable in times of extreme scarcity. For many years I have had an opportunity of traversing the Cambrian slate range, and the whole of the North Wales slate deposits. On no occasion have I ever found a quarry to any extent that has paid the cost of working on one of these veins, although a certain quarry has for three years pretended to have paid a dividend of 9 per cent. per annum, whereas it is the opinion of all practical men in the neighbourhood that this quarry has never paid its working cost. Several others of this class have been represented as paying profits of 200*l.* to 300*l.* per month; but, on examining the accounts, instead of profits these quarries have been working at a loss of 200*l.* to 300*l.* per month. Many reports, and I may add pamphlets too, have recently been published showing enormous profits on slate quarries, some giving the average poundage of 10s. over slate-making prices. This, of course, would give 50 or 60 per cent. profit; but omitting the most heavy expenses incurred in working slate quarries—driving levels, sinks, openings, working off waste rock, tramming, sorting and weighing, cartage to port, materials, management, discount on sales, and a variety of other expenses incident to the working of slate quarries. Moel Hebog.

THE BRITISH SLATE COMPANY.

Sir,—Being a constant reader of the Journal, I noticed two letters signed by "A Man of Experience," trying to cast some doubt on this company. I believe the directors have always treated anonymous writers with silent contempt. It is evident "A Man of Experience" is not a shareholder, or he would have known that the directors have been able to clear the property, open the quarries, provide sheds, steam-engines, and machinery of every description, &c., for a little over 60,000*l.* A friend of mine, a Welshman, who visits Wales every six months, has taken some pains to get me the most reliable information respecting those quarries. I am glad to say his report bears out everything the directors have said of them. His last report was:—"You may rest perfectly satisfied that it is a safe and good investment, and that the quarries are opening out splendidly." I must say, in justice to the directors, that they have not taken the fees they are entitled to by the Articles of Association, and I believe the Chairman of the company has devoted nearly the whole of his time for the benefit of the shareholders, they, no doubt, having a large pecuniary interest at stake; nevertheless, it is very handsome on their part to give their services gratuitously. How many companies would have been in a different position if it had not been for those enormous fees to directors? In conclusion, allow me to inform "A Man of Experience" that the shareholders can at all times get all the information they require from the secretary, and that they have every confidence in their property and the management, and for the future would give him a little bit of advice, that is—to mind his own business.
A Shareholder.

THE BRITISH SLATE COMPANY.

Sir,—As your version of my letter in last week's Journal wholly evades its main purpose—the correction of your list of dividend-paying concerns for the safety of *bona fide* investors—I am forced to send the letter as I wrote it, as an advertisement to this week's pages. I may here explain that the Vron and Cwm Eigia Quarries are the only ones in work held by the British Slate Company. I must also further remark that any tone of shadow of doubt as to correctness in what I state belongs to your translation of my words, not to what I wrote. Had I not been certain of my facts, I should not have written at all in the matter. I know nothing and care as little about the British Slate Company beyond the interests of fair quarrying and protection of investors.

All practical men know that after the proper reserves are set aside to keep up workings, 10s. per ton is as much as can be divided even in a good quarry, if its permanent prosperity is to be secured without continual calls for further capital. Now, this would require 1500 tons to be made monthly to pay 750*l.* per month profit, or 9000*l.* a-year; therefore, 15,000 tons a-year is rather within the paying mark. Those who at all know the scale of workings at the Vron and Cwm Eigia

narries in 1866 are aware how well grounded is my appeal to you to insist on
he British Slate Company supporting their declared dividend by figures.
A MAN OF EXPERIENCE.
April 15.

[ADVERTISEMENT.]

THE BRITISH SLATE COMPANY.

The following is my letter, as sent to the Editor for insertion on April 13.
A MAN OF EXPERIENCE.

"As the British Slate Company have not sent the figures showing the make of
late whereon they found their declared dividend of 9 per cent., permit me again
o call upon them to do so. It would require a produce of at least 15,000 tons of
late yearly to divide 9000*l.* (9 per cent. on 100,000*l.*) out of profits, setting aside
n adequate reserve to keep up the workings without continually calling up fresh
apital. What has been the actual amount in tons of the produce in slate and
labs of the Vron and Cwm Elgia Quarries in 1866? What has been the amount
ctually paid to shareholders in cash by the British Slate Company of their last
eclared dividend of 9 per cent.?
Responding to your appeal to your subscribers for help to make your lists of
lines as perfect as possible, permit me to suggest that you would do wisely not
o insert in your Dividend-Paying List any Mines or Quarries that will not
urnish figures showing the production, cost, and profit on which the dividend
based."

MINERAL RESOURCES OF ANGLESEA.

SIR,—The remarks recently made in the Journal by "Another Cornish Miner"
n the mineral resources of Anglesea have pleasingly caught the eye of one who
nows the district well. It is a positive fact that there are many copper-bearing
odes in the Parys Mountain district having similar bearings to the productive
odes in the Parys Mines, about 10° south of east and north of west, and it is
lso probable that the parallel lodes existing within a short distance north of
he Parys Mountain, near the sea shore, may be intersected by the same cross-
ourses that are supposed to have made the great deposits of copper ore in the
arys Mountain Mines. A few partial trials have been made here and there on
ome of the parallel lodes, which yielded copper ore of an excellent quality, but
n every instance operations have been confined too near the surface. I hear
hat a new company is in formation, for the purpose of more effectually carry-
ng out and working a very promising piece of ground in this locality, and it
s to be hoped that they will prove successful, and be well remunerated for their
outlay.—*Amlwch, Anglesea.*
CORNISH CAPTAIN.

THE PRINCE OF WALES MINE, AND CAPT. CHAS. THOMAS.

SIR,—Since sending my report to you to-day, my attention has been called to
he *Mining Journal* of this date, and the report of Capt. C. Thomas on this mine,
nserted at the request of some one signing "Country Speculator." On reading
his report, several points appeared to me to be so very far wrong, and calculated
o mislead our shareholders, that I considered it my duty to send you the fol-
owing, so that all interested my know the facts.
It is against the general rule of reporting by beginning at the upper, or shal-
ow, levels first, but I will take my starting point from the same as Capt. C.
homas—*i. e.*, the 30 fm. level east, which is driven about 32 fms. In the pre-
ent end we are cross-cutting the lode, and in 3 ft., but not through it; so far as
een it is composed of capel, with gossan intermixed, precisely the same charac-
er as in the 45, north of the ore-bearing part of the lode, and, from its kindly
ppearance, we expect shallow bunches of copper ore will be met with in this
evel. The 30 west is driven about 22 fms., but now suspended. The 45 east is
riven nearly 40 fms., the whole distance, with the exception of 2 fms., through
good course of ore. In the present end the lode is split; the south part, on
which we have been driving, is 1 ft. wide, yielding good stones of ore. We com-
menced taking down the north part to-day, which is yielding some saving work
ut I shall defer putting any value on it before it is taken down close to the end.
The two stopes in back of this level are still worth full 20*l.* per fathom in the
ighest backs, which is about 3 fms. high, with every appearance of continuing
qually as good many fathoms higher. The winze in the 45 east is down nearly
fms.; lode in the bottom 2½ ft. wide, worth 25*l.* per fathom, with a good course
f ore through the whole sink, and indicating an improvement, as in the last
ew days it is drained dry by the level below, which is about 4 fms. west of it.
The 45 west is driven about 15 fms., the last 4 fms. through a good lode, varying
n value from 20*l.* to 50*l.* per fathom, as may be seen by our reports. The 55 east
s driven 5½ fms.; lode in present end 3 ft. wide, worth 20*l.* per fathom, the
whole driving varying in value from 15*l.* to 35*l.* per fathom; and, as all the
water in the eastern part of the mine is coming from the bottom of the end, it
ndicates a large porous lode ahead, which induces me to expect a good course of
re will be met with before driving much further. The 55 west is driven about
fms., lode varying from 5 to 9 ft. wide, and in value from 35*l.* to 70*l.* per fm.;
n the present end full the latter size and value. "Country Speculator" calls
particular attention to this end, as being driven at 20*l.* per fathom, and says
ft. only can be driven by six men in one month. At that rate, how are the
en to get wages and pay the working cost? I say we can drive 9 ft. per month,
or which the company will have to pay 30*l.*, and will get 18 tons of ore, worth
05*l.*; and when the ground is laid open it can be stoped for 6*l.* per fm. Capt.
. Thomas says we have 200 fms. of ground in reserve; but I do not agree with
im on that point, as I positively say we have more than three times that quan-
ity. I also say the value of the reserves is very much underrated, as you can
lainly see from the ore sold and sampled, and now broken on the mine. The
atter, taken at the present standard, will altogether make 3500*l.*, the produce of
20 fms. of ground, the whole taken away on the course of the lode below the 30.
Capt. Thomas also gives his opinion that the mine will never pay large profits,
rom the ground being so hard, and the ore of lower value. But I say, without
ear of contradiction, that in the whole driving in the 55 the lode is much larger,
nd has yielded more value than the 45 did, for the same length of driving, di-
ectly over. So far as my experience goes, I would much rather, for a continu-
nce in depth, see a large strong lode, with yellow copper ore, than one with
ither grey or black copper ore. Capt. Charles Thomas also says that there
s no indication of any other lodes in the sett north of the engine-shaft.
This I also deny, as we have opened up at surface two distinct lodes, which can
e seen at any time—one about 22 fms. north of the lode now being worked on,
he other from 25 to 30 fms. further north, both showing a very promising ap-
earance; the former we expect to cut in about 8 fms. further driving in the
5 cross-cut, which we shall resume driving immediately the winze in the 45 is
ommunicated with the 55, and I am satisfied the cross-cut is in mineralised
round, as the water coming from the end is strongly impregnated with copper.
s regards the machinery, I am satisfied it will answer our purposes for a long
ime, and this opinion is supported by our engineer, Mr. W. Mathews.
Prince of Wales, April 13.
J. GIFFORD.

THE PRINCE OF WALES MINE.

SIR,—I was much surprised that Capt. Charles Thomas should have made the
istake, which I suppose he has, in his valuation and opinion of this young,
romising, and so far, very productive mine, as he is contradicted by the report
f Capt. James Richards, of the Devon Great Consols, who, I believe, inspected
about the same time as Captain C. Thomas did. The ores sold, and for sale
o-day, as also what is now in preparation for sale, and the work at surface, in-
ependent of my own recent inspection, support this contradiction. And as to
he promise of the lode itself, and the nature of the containing stratum, Captain
. Thomas, I know, will excuse me when I state that I would sooner take the
pinion of our agent, who has generally been found correct, than anyone from a
istance, although he may come from the West. I should not thus have troubled
ither you or the public, but I cannot silently permit a valuable property to be
rifled with.—*St. Michael's House, Cornhill, April* 18.
JEHU HITCHINS, Sec.

Telegram.—Sale of ore, April 18: 54 tons, at 7*l.* 2*s.*; 52 tons, at 8*l.* 11*s.* 6*d.*; and
7 tons, at 6*l.* 6*s.* = 1125*l.* 8*s.*

THE PRINCE OF WALES MINE.

SIR,—Being a constant reader of the Journal, I trust you will allow me space
or a few remarks with reference to that sweeping report from Capt. C. Thomas,
which was published last week. I have no doubt, indeed there can be none, but
that Capt. Thomas is a good tin miner, as he has been brought up in a tin mine
from boyhood; but take him from his locality, and place him in a copper mine
in this district, and he is like a fish out of water. He cannot be a proper judge
as to the value of a copper lode, neither can he be a proper judge as to the cha-
racter of the rock in which the lodes are embedded to say whether it is to be pro-
ductive of mineral or not. Very great mistakes are often made by sending a tin
miner into a copper mine, and a copper miner into a tin mine: but let this be
as it may, I am sorry to think that Capt. Thomas has written such a ruinous
report on such a mine as the Prince of Wales. Now, Sir, in directing attention
to the report, I beg to ask what he means in reference to the granite? He says
they would have to sink 250 to 300 fathoms to reach it in the Prince of Wales
mine. This assertion is quite incorrect. Why, Sir, is the cap of granite at
Hingston Down Mine to unbottom the killas in the Prince of Wales? I ask, is
nature going to act against Nature with reference to the granite and killas?
In the next place Capt. Thomas states that Hingston Down Mine is wholly in
granite. This is not the case, as the western shaft is sunk from surface to the
killas, and the 35 is driven east many fathoms towards Bayley's shaft in
killas; and I think, if my memory serves me right, that Bayley's engine-shaft
is sunk near the junction of the killas and granite. I have been underground
at Hingston Down many times, and I think Capt. C. Thomas should have made
himself perfectly acquainted with the mine, so as to have prevented him from
making such blunders;—however, I am glad to find a false prophet coming from
the West, and not from the East.—*Liskeard, April* 18.
MINE AGENT.

THE PRINCE OF WALES MINE.

SIR,—Being a shareholder in this mine, I was somewhat astonished on reading
the report of Capt. Chas. Thomas in last week's Journal—to see such a contra-
diction in the value of the different parts of the lode, and future prospects of the
mine, to what Capt. Gifford, our manager, gives us. Which are we to believe,
a stranger to this property (let him even be considered a great man), or a man
who has, from his ability and good judgment, succeeded in bringing this pro-
perty to its present successful issue, and to whom the great credit is due that all
his valuations of the lode, from time to time, have been more than substantiated
by the amount of ore sold? This is worth a hundred reports from inspectors. I
can only, therefore, consider Capt. C. Thomas sadly out in his judgment;—for,
in the first place, he says the ore in the 55 is not so rich as in the 45; the agent
says it is better, and also many others that have seen it; in fact, for the dis-
tance driven in the former level, it is richer than it was for the same distance
in the 45. Then, again, Capt. Thomas says he could not see any north lodes;
surely he could not have looked for them, as it is well known by every miner
who has been on the sett that there are two, which are of a very promising ap-
pearance, and are only a short distance off the engine-shaft. Then, again, he
says about 200 fms. in reserve—this is so palpably wrong that I hope the agent
will answer it in his next report. In fact, the report altogether is such as would
almost induce anyone to believe that it had been worked up for a certain object:
other matters, of course it can never be considered he would allow himself to be
a party to such an act as this.
An Inspector, to be genuine, must be independent of every evil influence. Un-
less he can and does set himself to his task with an unprejudiced mind, and can
perform his work without respect to two of Noah's children—the "Bear" and
"Bull," he, as a rule, is not to be depended on. He may be able to write a very
glowing report or a very damnatory one. He may be a man whose slightest
word of praise will enhance the value of the property, or whose condemnation
may ruin it; but unless his work is performed in every case with candour and
truthfulness, allowing no prejudice to cloud his judgment, but executing his task
with calmness, firmness, and fairness, whether it be to praise or condemn—un-
less he can do this, he cannot be considered as one to be relied on in the discharge
of his duties. As for myself, I place great confidence in Captain J. Gifford, and
believe him to be a sound and practical miner.—*April* 17.
A. P.

THE PRINCE OF WALES MINING COMPANY.

SIR,—Had a "Country Speculator" published the report of Captain Charles
Thomas when it was made—five weeks ago—we might have believed in his state-
ment that he did it *pro bono publico*, but when a report is kept quiet for five
weeks, and then suddenly published on the eve of a heavy settling day, some
illnatured people may insinuate that a "Country Speculator" was in reality a
"London bear." Capt. Charles Thomas, even in his best days, was not infal-
lible, and of late years has made many grave mistakes. The publication of his
report now, however, is not fair even to that gentleman. At the time he, it is
said, inspected the mine the 55, or bottom level, had only been driven a few
fathoms, and worth 35*l.* per fm. only, whereas the 45 had been worth as much as
50*l.* per fm., and hence his opinion that the lode would not be so good in depth.
Soon after his report was made the 55 became worth 50*l.* per fm., and is now
valued at 70*l.* per fm. under a point were the 45 *was of no value*, and 20*l.* per fm.
beyond the value of the 45 at its richest point, thus showing conclusively that
the lode has *increased* in richness *in depth*, whereas Capt. Charles Thomas's
report was founded upon the idea that it would not be so. I believe Mr. Thomas
is also wrong in stating the quality of the ore had declined 4 per cent. It is a
significant fact, which ought also to be recorded, that a "Country Speculator"
omits to put the date of the report he sends for publication, and, consequently,
leads the readers of the Journal to infer that it was a new, and not an *old, re-
port* which had been *circulated and canvassed in the market more than a-month
ago*, with a view of knocking down the shares.
A SHAREHOLDER.

THE PRINCE OF WALES MINE, AND ITS INSPECTORS.

SIR,—The report of Capt. Charles Thomas, of Dolcoath, as published in last
week's Journal, has undoubtedly taken the mining community of East Cornwall
by surprise, relative to the estimated value of the above mine. I do not think
that the goodly number of practical mine agents that have inspected this mine
during the last six months need be much surprised, when it is remembered that
for the first few months of this mine being inspected, for the first and second
visit of each inspector, most of those practical agents were found to be full 50 per
cent. below the real value on the different points of operation, as proved by the
ground driven and stoped, and the amount realised from the sales of ore. Capt.
Gifford himself has up to this time made the returns exceed his reports. Although
I have the highest respect for Capt. Charles Thomas, and his opinion of mines in
general, yet in this instance I am inclined to think he has fallen into the error
of estimating the lode in the 45 west and 55 west about 40 per cent. below its real
value. In this Capt. Thomas is not alone, inasmuch as nine out of ten of his
brother inspectors, on their first report, have got into the same down train, but
have since had reason to alter their opinions, seeing that nearly all the stuff
broken on the lode in the 45 and 55 has been sampled and sold at an average
considerably above the average copper ore of the county. I have inspected Prince
of Wales Mine more than once, and have had reason to change my opinion, at
least once. I think, from my personal knowledge of Capt. Thomas, I may ven-
ture to say a second visit would give him a more accurate idea of the real value
of the ore in the levels referred to, and I feel confident he would be candid enough
to acknowledge it, as he at present differs so widely from the opinions of, I may
say, the whole of his brethren in this locality. This I strongly recommend.
AN INSPECTOR OF PRINCE OF WALES MINE.

COPPER TAMPING BARS—OLD MEN'S WORKINGS.

SIR,—From the many accidents which occur through the explosion of holes
while tamping, I am induced to suggest the *exclusive* use of copper-tipped tamp-
ing bars. I would have 6 in. of copper rivetted and soldered on the end of the
iron bar. This would effectually prevent sparks from the stone through friction,
and it would, therefore, be no hardship on the men to make it a fixed rule that
none other should be used on pain of dismissal.
Another subject which requires attention is the driving of ends in the neigh-
bourhood of old workings. A bore hole should always be kept in advance in
metalliferous mines, as it already is in collieries, whenever there is a probability
of old workings being near. By this means the miner might obtain a sufficient
warning, and the loss of many lives might, therefore, be prevented.
April 17.
DEVONIAN MINING AGENT.

MINING IN THE DISTRICT OF WENDRON.

SIR,—After an absence of considerable length, I was well pleased on a short
visit lately made to the district of Wendron, the principal mines in which are
improved to an extent quite unknown to the mining public. The discoveries in
the four lodes now being wrought upon under the name of Trumpet Consols are
such as to warrant me in saying, with certainty, that the mine will immedi-
ately take the lead in the district as to profits, and give the management the
credit it deserves. The discoveries now opening in the adjoining mine, New
Trevenen, are destined to still further prove that perseverance generally leads
to success. A productive lode has been cut by a cross-cut in the 70 fm. level,
and opened up for a considerable length, and no doubt exists that the same
productive lode has not been seen from the 70 to surface. East Trumpet Con-
sols, also adjoining, is a most desirable property, with sufficient machinery, as
in New Trevenen, for taking immediate advantage of discoveries already made.
Basset and Grylls will make a very fair profit on the quarter's working, and is
greatly improved.—*April* 17.
STANNUM.

THE NEW QUEBRADA COMPANY.

SIR,—Will you allow me, through the Journal, to inform my fellow-share-
holders that, in addition to the circular I have sent to them, and in reply to
which many of them have requested me to do so, it is my intention at the meet-
ing, on Tuesday, to propose—"That the directors be requested to convene a spe-
cial meeting of the shareholders, for the purpose of reconsidering the Articles of
Association, and making such alterations therein as may be agreed to at such
meeting;" and if the same, or other resolution to the same effect, be passed,
then to move "That a committee of five shareholders be appointed to reconsider
and revise the present Articles of Association, and report thereon to the board,
so that they may be forwarded to the shareholders for their consideration pre-
vious to the holding of the meeting."
FREDERICK H. HEMMING.
25, *Moorgate-street, April* 18.

[ADVERTISEMENT].

FRONTINO AND BOLIVIA GOLD MINING COMPANY.

SIR,—I recently took occasion to acquaint the shareholders that the directors
would enter into no correspondence or controversy whatever with Mr. Josiah
Harris, declaring, at the same time, that many of the statements he put forth
were false, and the remainder of them were gross misrepresentations. He has,
however, since circulated an application to the shareholders to get their signa-
tures to a requisition for calling an extraordinary general meeting to investi-
gate the affairs of the company, to appoint inspectors for that purpose, whom
he promises to name, and in the said circular he repeats and enlarges the num-
ber of his false charges.
The directors, therefore, feel it now to be their duty to address themselves,
without further delay, to the shareholders, for the double purpose of stating to
them that they are engaged in preparing their report and the accounts to lay
before a general meeting, which general meeting, they do not doubt, will be
held in the course of the ensuing month, and in the meantime of asking the pro-
prietors to repose confidence in their honesty and integrity, rather than of lis-
tening to the interested misrepresentations of such a man as Mr. Josiah Harris.
The directors trust that they shall not make this appeal in vain, and they will
be glad if, when the general meeting shall be held, it should be able to find some
well-qualified gentlemen who could be added to the present direction, or be sub-
stituted for any of those who have now the honour to hold the office, in order
that the board may be so constituted for the future as to enjoy the confidence of
the shareholders.
The directors desire to add that the very numerous frauds perpetrated by the
late secretary have prevented them, notwithstanding the labour they have de-
voted to the purpose, of getting their report and the accounts ready at an earlier
period. They rejoice, however, that the time for holding the meeting is now near
at hand, when they may have an opportunity of refuting the slanders of Mr.
Josiah Harris, of exposing his motives, and of justifying themselves.
32, *New Broad-street, London, April* 17.
HENRY L. PHILLIPS,
Managing Director.

THE FRONTINO AND BOLIVIA GOLD MINING COMPANY.

SIR,—Permit me through your valuable Journal to call the attention of my
fellow-shareholders to a most extraordinary circular, sent us by Mr. J. Harris,
16, Park-road, Brompton, in which he makes statements respecting this com-
pany which have very much disquieted my peace of mind about our actual posi-
tion, and if one-tenth part of what he says be correct, as to the bad manage-
ment and gross frauds practised on the public and us, our company outshines
all others in acts of commercial depravity. I trust he has made grave mistakes
in what he says, and that the directors will either, through the Journal, con-
tradict and explain away his assertions, or immediately call the shareholders
together, and lay before us the position we are in, before they make any more
calls. The time for holding our annual meeting is long past, which also in-
creases my fears that something is wrong.
A SHAREHOLDER.

THE FRONTINO AND BOLIVIA GOLD MINING COMPANY.

SIR,—My brother-shareholders will, no doubt, be as surprised as I was to get
some papers from a Mr. Josiah Harris respecting the Frontino and Bolivia Com-
pany. A more disgraceful attempt to ruin a company was never made, and I
am quite certain that no respectable shareholder will, for one moment, support
the proposition he makes. I am told at the office of the company his statements
are false, and that he and two or three others are simply doing this in order to
get the winding-up and liquidation of the company. * * * * I believe the
concern is doing well, and I hope every shareholder will endeavour to defeat Mr.
Harris's plans.
A HOLDER OF ONE HUNDRED AND SEVENTY-FIVE SHARES.

VALUABLE DISCOVERY IN ITALY.—A letter from Naples says—"At the foot of Vesuvius, on a property called Torre Bassano, has been discovered a mine of virgin 'pozzolana.' The strength of this cement is said to be equal to, if not greater, than that of the celebrated pozzolana of S. Paolo, of Rome, whence England has generally drawn her supplies. In 1852 there was a 'find' of the same material, and the Government of that day were so satisfied as to its merits, that they used it in the construction of the only dry dock we have in Naples. On making some alterations in this dock recently, it was with the greatest difficulty that any impression could be made on the pozzolana of which we have spoken, proof being thus given of its great excellence. The Govern-ment has already contracted for a considerable quantity of it for the construction of the new mole, and for other public works in Palermo, and much has been ex-ported to Alexandria. On the ground of economy it merits great attention in England; for, whilst it is at least equal in quality to the pozzolana of S. Paolo, in the opinion of very competent authorities the trouble and expense of its trans-port would be very much less. To S. Paolo vessels might be sent expressly for this purpose, whilst those which come constantly here with coal, and generally leave in ballast, would for a small sum take such a freight. It is shipped for 35 centesimi the quintal; the transport would, I imagine, be trifling. During the operations of mining for pozzolana and cutting lava which have been recently going on, it as been found that, after the lapse of twelve years, the heat of the fires which formed it still retains much of its intensity. The lava which flowed down in the fatal cholera year of 1854 is still hot at the depth of from 10 to 30 metres; and in the Rio di Quaglie, when it rains, a dense vapour rises up."

Meetings of Public Companies.

THE DUNRAVEN UNITED COLLIERIES COMPANY.

The first ordinary general meeting of shareholders was held at the offices, Bute-crescent, on April 13,—Viscount MALDEN in the chair.

The report of the directors stated that the company took pos-session or the collieries on May 1. The interest of the shareholders runs from Dec. 15. From a report by the managing director, and from an in-spection of the collieries, the directors are enabled to speak satisfactorily as to their condition. The New Brithdir Collieries are working profitably, yielding a large amount of coal, without requiring any further outlay of capital. The Blaencylach Colliery has been much improved and extended. Twenty-six coke ovens have been erected, and the directors look forward to a profitable result therefrom. The Dunraven Colliery has been opened to the 4-ft. vein, and is gradually getting into profitable working. By a moderate additional outlay a second pit, which had been intended only as an air-shaft, is being actively carried on, by means of which a very large increase of the output of the col-liery will be obtained. The directors present herewith the accounts and ba-lance-sheet to Dec. 31 last, duly audited. A dividend for the past year to Dec. 31, at the rate of 10 per cent. per annum, free of income-tax, has been declared and paid. The directors concluded their report by expressing their confident expectations of the success and prosperity of the undertaking. The report was received and adopted, and the retiring directors, Viscount Malden, Mr. Norton, and Mr. Milnes were re-elected, and the auditors were re-appointed.

The revenue account showed total receipts for the year 67,497*l.* 10*s.* 1*d.*, leav-ing a balance, after providing for payment of 10 per cent. dividend, to be carried forward of 327*l.* 0*s.* 5*d.*

The noble CHAIRMAN, in moving the adoption of the report, said that if any gentleman present desired any information additional to that con-tained in the report, or any explanation of the accounts, the directors would be most happy to furnish either.

The Rev. DAVID EVANS, of Dudley, seconded the proposition, and observed that the directors and the manager were entitled to their warmest gratitude for the manner in which they had conducted their affairs through times of such unprecedented difficulty, and by which they had fully earned the confidence and thanks of the shareholders. He remarked that the iron trade of Staffordshire showed symptoms of improvement that afforded hopes that their next report would be better even than the present, as their coke had obtained in these mar-kets a very high reputation; and if they only maintained its present character for quality it bids fair to monopolise the supply of the Black Country. One of the largest ironmasters in that district had informed him that up to a recent period his works had been ably supplied with coke from the county of Durham; but, although they paid 4*s.* to 5*s.* per ton more for that than the Dunraven, the quality was not so good, and he was now buying only from this company. He had also heard similar opinions expressed by other men of experience in his neighbourhood.

Mr. W. ROBINSON SMITH proposed the election of the retiring directors.

Mr. PHILLIPS seconded the motion, which was unanimously agreed to.

The auditors, Messrs. Lawson and Walkinshaw, were re-elected, on the motion of Mr. W. ROBINSON SMITH, seconded by Mr. DAVID JOSEPH.

A resolution was then agreed to authorising the directors to issue debentures, not exceeding in total amount 20,000*l.*, for the purpose of completing and extend-ing the works at Dunraven Colliery.

The Rev. D. EVANS wished, before the meeting separated, to suggest that the notices for future general meetings should be given by circular as well as ad-vertisement, as the latter might escape the notice of distant shareholders. He also suggested the expediency of holding all meetings at their Cardiff offices. This would tend to economy, by enabling them to dispense with their London offices, and by concentrating their business arrangements.

The noble CHAIRMAN said that the notices of meeting had been published as directed by the Articles of Association, but in future a notice of time of meeting would be added to the balance-sheet forwarded to members. The subject of re-moval of offices had been already under the consideration of the directors.

Mr. J. D. THOMAS said that he had not been able to attend the meeting of di-rectors when the subject was discussed, but he considered that the suggested concentration of their business and their offices would be a sensible and prudent measure.——The noble CHAIRMAN said that the notice necessary for giving up their London offices had been already delivered, but it would probably be ad-visable to hold occasional meetings in London.——Mr. ROBINSON SMITH said he held from 15 to 20 proxies given him for the express purpose of voting, if ne-cessary, for the removal, and he was much gratified to find that the measure had been decided upon.——Mr. THOS. JOSEPH expressed an opinion that the change would be very satisfactory to the shareholders generally.——A resolution ap-proving of the notice given by the directors was then unanimously agreed to on the motion of the Rev. David Evans, seconded by Mr. J. D. Thomas,

Mr. ROBINSON SMITH moved a vote of thanks to the noble Chairman and board of directors. He remarked that it would have been well if the report had stated the fact that the directors had recently very much increased their hold-ings in the undertaking. They had from the first been the largest shareholders in the company. He was himself one of the largest shareholders outside the board, and he could state that this extension of the interests of the directors had given him still greater confidence in the present condition and future pro-spects of the company.

The Rev. D EVANS, while seconding the vote of thanks, said that he knew several members who felt so much confidence in the directors, the manager, and their undertaking, that they were prepared to take many additional shares.

Lord MALDEN acknowledged the compliment, and said that the directors would have much pleasure in continuing the efforts they had already made for the success of the company.

SOUTH FOWEY CONSOLS MINING COMPANY.

A numerously attended meeting was held at Wheal Fowey Consols account-house, on Tuesday, for the purpose of adopting the necessary measures in connection with the commencement of operations at a new mine, to be called the South Fowey Consols.

Among those present were the Rev. Dr. Treffry, and Messrs. Nicholas Kendall, M.P., E. Brydges Williams, W. West, Jehu Hitchins, W. Polkinghorne, F. Puckey, T. Cock, H. Vivian, &c.

The Rev. Dr. TREFFRY was called to the chair.

The CHAIRMAN, after a few prefatory observations, said that the mines in that neighbourhood had been what was termed unbottomed, and that they had been working them for some time at a very considerable loss; but, notwithstanding this, they had gone on hoping against hope, and now, speaking of the old mines, they found it useless to hope any longer; therefore, they had determined to make a very strong effort to bring out some favourite ground lying to the southward of Wheal Fowey—ground upon which many an old tributer had turned longing and anxious eyes—the hope being very great that there were abundant treasures there to be developed, and from what he had heard he believed it was the intention of his late relative, had his life been spared, to have vigorously worked the ground upon which he trusted those pre-sent would that day decide to commence operations. Their original intention of amalgamating this new ground with old Fowey Consols had been abandoned, the adventurers having determined to stop that mine entirely, and to wind-up its affairs. The object of the present meeting was to form a company to work the south ground, under the title of South Fowey Consols, and as a totally inde-pendent enterprise. The monthly cost for some nine or twelve months would be very inconsiderable, and they had to lay before the meeting the opinions of Capt. John Petherick and Mr. Clymo (of South Caradon Mine), the latter of whom had announced his intention of taking 50 shares in the undertaking, on condition that it was worked as a separate adventure; but were it worked conjointly with the old mine he would have nothing to do with it. Capt. Petherick had also re-commended that the new ground should be separately worked, and hence the reason why they had come to such a decision in the matter. An engine of a cer-tain power was many years since erected on the south ground, and the mine was worked to the depth which the power of the engine would admit of, but through circumstances well known to those present his relative did not continue the working of it at any further expense, intending to wait for a more favourable opportunity, which, on account of his death, unfortunately never came; but thousands of tons of ore were raised at a shallow level from the south ground. Many of the old miners, especially the old tributers, had notified a wish to turn their attention to that part of the mine. The principal object they had in view was to benefit the neighbourhood, in order that they might be enabled to give employment to those who had been so long out of work, and, of course, they must admit that they hoped also to get something back for themselves, but still that was the principal motive which had induced them to take this matter in hand; and if they could only start that day with something like a respectable number of adventurers, they would then be in a position, with the assistance they would receive from their London friends, to put the matter more promi-nently before the public at large.

Mr. BRYDGES WILLIAMS said the present might be an unfavourable time to bring before the public a large mining speculation of this description, because certainly there had been a most unfortunate depression in the mining interest during the last twelve or eighteen months, but time alone would show whether they would be able to get over that depression, and whether discoveries would be made, in order that they might work their mines as in years gone by, and which was the only means at present by which they could alleviate the distress that was most undoubtedly felt amongst the mining community, more espe-cially in the western division of the county. One of the best and surest ways of meeting that distress was by endeavouring to set on foot a fresh adventure. He did not mean to say that they should get up speculations of an unsubstantial character to induce people to adventure for the sake of meeting this distress, but when, as in this instance, a legitimate adventure was before them, he thought it was their duty to do their utmost to promote it, and make it successful. They had several advantages in their favour, for they had liberal lords. A large number of shares had been taken up in the neighbourhood, including many of the old tributers who had worked in some parts of this mine, they having al-ready invested in the new concern. He thought that their future prospects were very promising indeed. He proposed—"That a company of adventurers be, and is hereby, constituted upon the Cost-book System, for the working and carrying on a mine to be called the South Fowey Consols Copper Mine, situated in the parish of Tywardreath." He was sure they should all be agreed that the Cost-book System was the true system, and unless that condition had been in-troduced he should have had nothing to do with it. (Hear, hear.)

Dr. DAVIS seconded the resolution, which was carried unanimously.

Mr. W. POLKINGHORNE read the proposed rules and regulations for the man-agement of the company, which were in accordance with the Cost-book Principle.

——Mr. W. BROWNE proposed that the rules and regulations be approved and entered in the cost-book.——Mr. WEST seconded the resolution, which was put and carried.——Mr. N. KENDALL, M.P., was glad to find they had such a wholesome speculation in the county, and was delighted there was a prospect of giving employment to those unfortunate men who had for so long a time been deprived of it. He wished the undertaking every success.

Mr. JEHU HITCHINS said that when the matter of forming a company to work the South Fowey Consols was first mentioned to him he fell heartily and readily into it, believing that was one of the first properties in the county of Cornwall. It was at that time contemplated to work it in connection with the Old Fowey Consols, and he must confess that he then favoured the idea, but since then he had been convinced of its non-utility, and he was now glad to find their intention was to work it as a new and independent sett. He certainly considered that he was extremely fortunate in being appointed as the London agent of the mine, because he felt quite convinced that it was a most valuable piece of ground, and it came out under more than ordinarily favourable auspices, inasmuch as they would see, by the resolution which it was his intention to propose, that they were favoured with a board of directors which consisted of gentlemen of undisputed talent and ability in mining operations. (Hear, hear.) The resolution was—"That the Rev. Dr. Treffry, and Messrs. E. Brydges Willyams, H. West, W. S. Sutton, and W. Browne, be the board of directors, with power to add to their number." (Applause.) The whole thing appeared to him to be perfectly feasible, and he would repeat that they came before the public with more than ordinary prospects of success. They had a most able directorate—men of education, principle, influence, and ability, and an efficient purser. The Cost-book System was an exceedingly good one, because it was disencumbered of the pains, penalties, and law expenses of a joint-stock company—(hear, hear)—and, moreover, they had this advantage, that every shareholder could relinquish his liability whenever he thought proper. They could work the mine with water instead of steam-power, and he believed the undertaking would be thoroughly successful, and, therefore, he had great pleasure in giving it his support.

The Rev. G. ROSS seconded the resolution, which was carried.

Mr. W. Polkinghorne was appointed purser; Mr. Jehu Hitchins the London secretary and agent; Messrs. Willyams, Treffry, West, and Co., of St. Austell, bankers; and it was decided that the directors should be empowered to take all necessary steps to commence operations, and to appoint the necessary officers, and that a call of 5s. per share on 6000 shares be forthwith paid to the purser.

The proceedings terminated with a vote of thanks to the Chairman.

Royal School of Mines.

MR. WARINGTON SMYTH'S LECTURES ON MINING.

LECTURE XLIX.—Having described various contrivances and balance "bobs," by which friction is obviated, and the pump-rods are made to work with a great amount of smoothness, the lecturer referred again to the Tresavean Mine, where there is one of the most remarkable shafts in the world, and where the engine at the top works the rods with a succession of nine sets, or lifts, attached to it, with three balances. These are simply strong beams, and may be made in various ways. They are sometimes of cast-iron, and occasionally of wrought-iron, but it has been objected that after a time they become brittle, and liable to fracture, and then an accident is sure to be serious in its results. Commonly, however, these balance beams are constructed of a single horizontal balk of timber, with a king-post over, and strong straps of iron to hold the extremities. Latterly cast-iron or wooden beams, with caps of cast-iron, have come into vogue. In Cornwall the connecting rods by which these balances are set to work are 6, 8, or 10 fms. long, and are fixed at that distance to the main rod. In plunging-pumps they ought to have weight enough to force up all the weight of water, but as a rule, they are able to do a great deal more than that. The sinking of the Tresavean shaft is a very remarkable work. It was carried down to a depth of 338 fms. through the solid granite, and, strange to say, it took only two years and two months to complete it, although with ordinary sinking it would have taken 20 years. The plan adopted was to make twelve cross-cuts from an adjacent shaft, which had been already carried to a great depth; and then, by an accurate and careful survey, fix the ground through which the intended shaft must come down. At each of these points a gang of men was set to work upwards and another downwards, so that 24 gangs, or pares, were employed at the same moment; and the calculation was so accurate as to require but little rectification when they met. The size of the shaft is 12 ft. in length, and the cost of the sinking was about 20,000*l.* The pumping machinery here was of a very powerful kind, and the weight of the main rod, exclusive of the weight of the water in the bucket-lifts at the bottom, is so large, that for this lift, and to set in motion all the balance-bobs and the main beam of the engine a strain of the most enormous character has to be met. Besides this, there are frequently horizontal rods in the levels to be worked, all of which must be considered in taking account of the amount of work an engine is doing. With all this strain it is obvious that fractures are likely to take place, which are sometimes productive of the most awful consequences. They would all recollect the serious accident that took place some time ago, by which more than 200 men lost their lives. That loss of life was, no doubt, the effects of a continuous chain of accidents, but it was produced in its direct effects by the fracture of the main beam. That beam was of cast-iron, and the pumps were attached to it in a different way to any he had yet spoken of—a way condemned by many experienced Cornish miners and engineers. One end was, as usual, in the engine-house and the other end overhanging the shaft, but a bye lift down a second shaft was attached to the inner end. Some had said that the accident arose from the fracture of the pump-rods, through not being well balanced, and so suddenly releasing the main beam indoors. Others that it was owing to the manner in which the cast-iron centre pieces were wedged or keyed together. But, whatever the primary cause, the fatality was due ultimately to the fracture and fall of the main beam down the shaft. It was hard to say who was most to blame, for, independently of any defect in the rods, or their position as regards the main beam, the shaft itself was in a very bad condition, and that was, in a great measure, the reason the results of the accident were so disastrous. This brought under view other ways of attaching the pumps; and, without going back to the days of Smeaton and Newcomen, and the parallel motion of Watt, an engineer named Bull had introduced a system of attaching the pump-rod directly to the piston-rod. This was a very plausible system, as it did away with a great deal of dead weight, and the necessity of building an engine-house; but it had yet to be proved whether it possessed the same degree of economy as the better constructed beam engines. Moreover, it must be observed that the taking up the engine-shaft in this way interfered with its use for other purposes, and thus hampered the operations for room. Nevertheless, several fine engines on this principle had been erected by Mr. Fairbairn, and at the Mostyn Collieries, but they had not, with actual figures, been compared as to their economy with those of the beam construction. Another plan, much in vogue, though of doubtful economy, is that of placing the beam below the cylinder, by which a lofty engine-house was rendered unnecessary; and it is claimed as an advantage that in case of fracture the fall of the beam would not produce such serious results. The inconvenient position of the stuffing-box of the piston was, however, a great drawback. At the Grand Hornu Colliery they had a large engine of this kind; and they were also puting in a magnificent one of the same class in the under-sea collieries at Whitehaven. There are others in the old Wallsend district; but, so far as he could judge from his Cornwall experience, this engine was not likely to compete in efficiency with the engines which have been so many years in use in that county. Since the Hartley accident greater attention had been bestowed on the materizl of which the engine beams are composed, and cast-iron has been replaced by wrought iron, of which latter material there have been some remarkably fine examples constructed. Some had been, for various reasons, constructed before that, chiefly when they had to be carried across a mountainous district, to avoid the risk of fracture by a fall. One of the best wrought-iron engine beams that he knew of was made in 1862 for the Clay Cross Collieries, in Derbyshire. The engine cylinder was 84 inches in diameter, the stroke 10 feet, and the beam, consisting of two rolled iron slabs, was 36 feet in length, and 7 feet deep at the centre. These are the largest pieces of wrought-iron applied to purposes of this kind he knew of; but north of Newcastle, and at the East Caradon Mine, in Cornwall, there are built beams of wrought-iron. These are formed in various ways, but chiefly by pieces of boiler-plate iron, rivetted together, so as to form cells, with a piece of the best faggotted iron carried around them. The lecturer then spoke of the various modes of transmitting the power when the pumps had to be employed at a distance from the engine, by means of horizontal rods, and referred to a remarkable case at the Devon Great Consols Mine, where they worked up the brow of a hill for half a mile. The lecturer next referred to the modes of calculating the amount of work to be expected from well-constructed pumps, worked by water or steam power. The quantity of water raised is calculated by a simple problem, based on the diameter of the pumps, the length of the stroke, and the number of strokes per minute. It was first proposed to raise water by means of the steam-engine at the beginning of the last century; and Newcomen afterwards erected engines on a large scale in Cornwall and elsewhere. The improvements of Smeaton had greatly increased the amount of work done, but it was comparatively small until Watt introduced his separate condenser. At that time the work got out of an engine was from 7 to 8 million pounds raised 1 foot high by the combustion of a bushel of coals. Watt's separate condenser at once effected a great saving, and he agreed with the mine owners that a certain proportion of the savings effected by his engines over the old ones should be his reward, and he thus realised a large fortune. The amount raised by a bushel of coal by Watt's engine was increased to 17 million pounds, and then Watt thought that improvement could go no further. Engineers and captains of mines in Cornwall laid their heads together, and improvements made in one detail after another followed in rapid succession. These improvements were greatly stimulated by the commencement of those monthly reports of the work done by pumping engines, which have continued to this day, and which are a repertory of valuable information. He was sorry these reports were not so well known and attended to as they ought to be, and that not only Cornwall but other parts of the country were included. To the emulation thus created and fostered might be attributed Trevethick's tubular boiler, the jacketing of the cylinder, and other improvements, to retain the heat and obtain the most out of the fuel consumed and the steam generated; and the progress made was so considerable as to excite the greatest incredulity in other parts of England when it was announced that in certain Cornish mines a result of 70, 80, and even 90 millions of pounds had been raised per minute. The result was that a committee was appointed, in about 1829 or 1830, to test these alleged performances of the Cornish engines, consisting of Mr. Davis Gilbert and Sir Charles Lemon, with whom were associated two or three pitmen, and their investigations were conducted with the greatest accuracy. They locked up all the coal, and only allowed that to be used which was weighed in their presence. They examined the number of strokes made per minute, and measured the quantity of water delivered. One of the most remarkable of the engines thus tested was that at the Fowey Consols Mine, constructed by his (the lecturer's) friend, Mr. W. West. It was an engine of the largest calibre, and the mine one of the deepest in Cornwall. Its work had been estimated at from 90 to 96 millions of pounds of water raised per minute for every 1 cwt. of coal, but the committee found that during the time they were testing it it actually raised no less than 120 millions of pounds per minute. He was sorry to say that in these days the "duty" had fallen off. They either did not use such good coal, or there were not so much pride and emulation between the gentlemen connected with different mines as to the comparative excellency—the honour and glory, he might say—of their respective engines as formerly. Nevertheless, when it was found that engines were now produced which raised, at no greater cost of fuel, 60 millions of pounds where only 7 or 8 millions of pounds were raised, they would see that great improvements had taken place. It was also an important point, as it effected that economy of coal which was now so much talked about; and it should also be remembered the more unnecessary coal that was burnt the greater the wear and tear of the boilers. Every well-educated colliery engineer ought, therefore, to make himself acquainted with the engines that did the greatest amount of "duty," and the nature of those improvements of the apparatus that produced the greatest results for the smallest quantity of coal consumed and smoke given off, and in which, in short, the most perfect combustion was attained.

LECTURE L.—Having now discussed at some length the various appliances by which ores, or minerals, or water, have to be raised from the mine to the surface, they came to another portion of the subject, which required the most careful consideration—that of ventilation. This was a subject involving mechanical considerations to a great extent, but it was also necessary to consider its chemical and physical aspects. No argument was required to establish the necessity for ventilation. Everyone was aware that if a mere well were sunk it would soon be fatal to the men employed in the work without ventilation; and so also in driving a level from the hill side the same results would arise from the stagnation of the air within it. No particular limit could be fixed as to the distance which a level might be driven, as the point of safety depended much upon whether or not (or if so how much) noxious gases are evolved and the oxygen absorbed from the atmospheric air. In mining it was not sufficient for the purposes of ventilation simply to make a number of openings, as some of the worst ventilation in existence was to be found in the districts where a large number of shallow shafts were sunk to the seam of coal, but where a want of knowledge prevails as to the modes of distributing the ventilating currents of air through the workings. In these cases the result was frequent delay through the powder smoke hanging about, and the difficulty of keeping the candles alight, to say nothing of the injury done to the health of the miners. If they looked into these points a little more carefully they would find that the necessity of introducing bodies of fresh air into mines varied according to the tendency of the air to stagnate in the workings. The increase of temperature and of humidity as they advanced into the ground, and on the vitiation produced by the breathing of men and horses, by the lights employed, and by the use of gunpowder. Then there are a series of chemical changes always going on in the mine, the majority of which resulted in the absorption of oxygen. These are evidenced by the abundant formation of sulphates of several kinds in the older workings. Then they had emanations from the ground, such as carbonic acid, which exudes freely from certain rocks, and in many cases accumulates more or less in the old workings—and fire-damp from the coal seams in large quantities, sometimes regularly and at others suddenly, and without warning. The ventilation it is obvious must, therefore, vary considerably according to circumstances. Thus, where by the decomposition of the sides of the workings there is a considerable emanation of gases, in addition to the respiration of a large number of men, it will be necessary to have a larger quantity of air introduced than when, with an equal number of men at work, there are no gaseous exudations. Here there was a considerable difference between metalliferous mines and collieries. In the former the number of shafts and the different levels from which they were sunk, and the communication from one level to another by interior shafts or winzes, is so frequent that a good quantity of external air finds its way down, and a sort of natural ventilation is established. As he had already said, it does not follow that the mine which had the most shafts had the best ventilation; indeed, in such cases it would be often better to stop up some of them, and then a more regular distribution of air would be produced. It sometimes, however, happens in metalliferous mines, from the great number of openings, and the small number of men working at once, that the ventilation may be left to itself, or, at all events, only requiring to be managed and modified under certain circumstances, as when levels are driven out to a great distance beyond the winzes into those above. In collieries the case is very different. There the sinking is usually from the surface to a horizontal seam, where they had a large number of men working on one plane; and this fact complied with the necessity there is to carry away large quantities of gases emanating from the mineral they are removing, necessitates the introduction of a large body of air, and the finding of means to make the air pass down one opening and come up another. It is true that in collieries there may be more shafts than these, but unless there is a regular system of distribution the air will naturally make its exit by the nearest outlet. Hence in metalliferous mines, where there may be two or, perhaps, four men working at the end of a long level, a 4-in. or a 6-in. pipe, with a small pump worked by a man or a boy, will be enough; but no such contrivance would be of the smallest use in a colliery. In the latter, too, it must be recollected that the putting down of an extra shaft for ventilation was so costly as to be out of the question, as the expenditure of such a sum as 60,000*l.* or 100,000*l.* for such a purpose might well be regarded as doubtful in a commercial sense. The point would instantly be considered whether the ventilation could not be managed without this additional outlay. Since the Hartley Colliery accident an Act of the Legislature requires that in every colliery there shall be two shafts, or two outlets, and the division of one shaft by brattices is prohibited. Notwithstanding, there are circumstances under which such divisions must come into play, as in the interval of sinking an additional shaft, and a certain limit of interpretation has, therefore, been put upon the Act of Parliament. No doubt it was an economical plan to have but one shaft, and to divide it into two parts—the one for the ingoing and the other for the outcoming air; and in some cases it was further divided for pumping or drawing material. Whatever mode of working may be intended there must in collieries be a plan, and it was that, in a word, which made all the difference between them and the accidental system of metalliferous mines. Besides, there are large tracts of old workings, complete districts of pillars with openings between, where there are apt to be considerable accumulations of carbonic acid gas and other deleterious gases given off by the slack and waste material, besides those arising from falls of roof and the ordinary operations of the mine, so that large bodies of fresh air were required to sweep through the levels, and so render it possible for the workings to be carried on. There was one more contrast between the two to which he had before alluded. The shafts of a colliery were sunk generally from about the same level, while those of metalliferous mines were more frequently from very different levels, arising from the irregularities of surface which prevail in the western counties, and there are adit levels often driven so near the shafts as to give a natural current of air through the mine. Before sitting down to study the science of ventilating mines it was highly necessary that they should first be acquainted with the nature and property of the air and gases, for there was no more prolific source of accidents than a dangerous ignorance of these potent agents of evil. The qualities of the gases which had to be specially considered, besides their actual chemical constituents, were their fluidity, weight, and elasticity. Now, the air was apt, after having passed into the workings to a small distance, to become more or less vitiated. In the first place there were added to it various noxious gases, such as the products of combustion, respiration, the decomposition of organic matter, and the gases evolved by the mineral deposit, such as arsenical vapours, sulphurous acid, carbonic acid, carbonic oxide, sulphuretted hydrogen, and carburetted hydrogen. With respect to all these the men are exposed to considerable injury as to health, and special precautions are needed. Those accustomed to certain tin works, where arsenical matter is deposited, can smell it for a considerable distance. The results of bad ventilation are visible in several different ways. The want of light, owing to the powder smoke not clearing away, is a serious obstacle to work. Then, the candles will not burn, unless held nearly horizontally, and one man is required to hold the light while another works; and, above all, it seriously injures health. Men ought not to be allowed to work under such conditions. Again, on a warm summer's day, when there is no movement in the air above ground, there may come a total want of air in places where ordinarily there is a tolerably good ventilation, so that at such times the miners burn a whole bunch of candles at once to obtain but a small modicum of light. It was known in the earlier days in which mining was followed as a craft that some contrivance was necessary for the purpose of renewing the air in the workings of mines, and one of the earliest modes of doing this was to beat the air with a cloth, and which was somewhat analogous to the colliers beating gas out with their jackets. A more advanced system was a fan worked by a water-wheel, the air supplied by the fan being carried into the workings through a pipe, something similar to which might still be seen on a large scale. Now, it might be asked in what portion of the workings the gas would most likely be found—whether at the roof, the floor, or in the space intermediate between the two. The discoveries of Prof. Graham, the Master of the Mint, showed that gases had a strong tendency if left alone to mingle with each other, but, nevertheless, although this diffusion undoubtedly took place to a certain extent, and where the gases were in a state of rest, yet in mines they might depend upon finding them arranged according to their specific gravity, but they must recollect also that there were mixtures of these gases, and that some of them were the most dangerous enemies which the miner had to combat. It was, therefore, very desirable to be familiar not only with their chemical constituents, but also with the conditions under which they were found arranged in a mine according to their specific gravity. The lecturer then drew on the board a table, showing that the gases were to be met with in the following order, commencing at the floor of the workings:—First came water, which flowed along the floor of the level; next came sulphurous acid; upon that would be found carbonic acid, specific gravity 1·524; above that atmospheric air, occupying as it were the middle line; next in order came carbonic oxide, specific gravity 0·970; above that would occur sulphuretted hydrogen; then nitrogen, of which the specific gravity was 0·976; and, lastly, carburetted hydrogen. If they had to consider these gases as occupying different portions of a mine they must recollect—for this was a point most absurdly neglected—that if any of these lighter gases happened to be present in the deeper workings than those he would suppose the men to be working in, they would have a tendency to rise up into the position of the heavier gases, so that if they had a seam of coal or shale which gave off carburetted hydrogen below a well of water, such as a sump, the lighter gas would tend constantly to rise up through the water, and get into the workings above. Many explosions had occurred from ignorance of this, it being generally supposed that water was a positive barrier to the passage of gas. This was a very fallacious notion, as was proved by the circumstance that gas had in some cases bubbled up through a deep river, and been set fire to at the surface. The burning springs afforded examples of this phenomenon. The first gas they had to deal with was CARBONIC ACID, which, from its great specific gravity, was always inclined to accumulate in the lower workings. If this gas be present in the proportion of from 5 to 8 per cent., combustion was rendered difficult, and if it became as much as 10 per cent. the candles would go out, and any proportion beyond that was dangerous to life. An extraordinary instance of the presence of this gas in considerable quantities occurred at a colliery at Pontgibaud, in Central France, where the most powerful ventilating apparatus was required to carry it off, notwithstanding which the men were occasionally obliged to leave their work on its account. This was an exceptional case, but, nevertheless, in many of our collieries they might have such an exudation of this gas as to put out the lights. Lime water had been sometimes used to get rid of this gas, but a powerful current of air was best. SULPHURETTED HYDROGEN was a most poisonous gas, but it did not often occur. It had been recognised in the Whitehaven collieries, where it was given off by the decomposition of iron pyrites, and bubbled up from the old workings. In the Townly Colliery the men cut into a feeder in the stone drift, which contained a great deal of this gas, but it was nowhere found if the water was fresh. With regard to the middle stratum, composed of the COMMON AIR, it must be considered in various ways. The miners called everything "damp"—black-damp, white-damp, fire-damp, and so on—but what they meant was the common air vitiated by being deprived of a portion of its oxygen by the breath of men, by powder smoke, and by a great number of chemical agents in the rocks through which the levels were driven, brought into a state of activity by their tendency to decompose. It was the latter circumstance which made it easier to maintain proper ventilation through one ground than through another. NITROGEN was the atmospheric air deprived of its oxygen. CARBONIC OXIDE was a production rarely to be met with in collieries, but it should be guarded against on account of its poisonous properties, and it was strongly suspected, if not proved, to have existed in the mine at the time of the great Hetton explosion some years ago. CARBURETTED HYDROGEN is what is called fire-damp, and designated by the French miners *grisou*. If it exudes in a pure state it may be set on fire without danger, and it burns with a pale blue flame; but if it be mixed with from four times its bulk of atmospheric air it will explode, and most violently, when there are from seven to nine times its bulk of air mingled with the fire-damp. Those accustomed to fire-damp are aware of its different qualities and powers according to the proportions in which it is present in the air. But other gases are often mingled with it besides common air, and, therefore, their judgment cannot always be depended upon for safety. After some explanations as to the indications by which the miners judged of its presence, the lecturer concluded by pointing out that this gas was almost exclusively confined to coal and limestone mines, there being but few instances of its presence in metalliferous workings, and amongst those he named Clausthal in the Harz, an old mine near Rhyl, and Okel Tor on the river Tamar, Cornwall.

MINING, METALS, AND MINERALS—PATENT MATTERS.

By M. HENRY, Patent Agent and Adviser, M. Soc. Arts, Assoc. Soc. Eng.

The most interesting scientific event of the week is the meeting of the Institute of Naval Architects. The subject of metal armour-plates will, no doubt, receive continued attention.

A patent for a smoke-consuming fire-place has been taken by BOX-NEVILLE (as a communication from C. R. Marcadier, France). In this invention it is proposed to dispense with the smoke-passage, and place the fuel-grate in an inclined position from the back forward, one or more apertures being at the top-part of the fire-place, for the admission of fuel. A partition is used to hold a boiler in steam-engines. The said partition is inclined, and is furnished with an opening for the passage of flame, which is, by these means, deflected downwards, instead of descending, as heretofore.—A patent for melting-furnaces has been taken by T. G. WEBB, of Manchester. The improvements consist in using a central pillar in the furnace, whereby a chamber is formed for the reception of pots. Above the chamber are arches for deflecting the heat. Openings may be formed in the pipes, for the admission of air or gas, for various heating purposes. The openings are regulated by dampers. Ordinary fuel is employed in any known manner.

Belgium, though physically small, is one of the most important countries of Europe as regards the metallurgical arts, and it may be observed that a patent of an invention of that country has recently been specified. The invention referred to is that of B. LIETAR, of Brussels. The object is welding iron upon iron, steel upon steel, and iron upon steel. For an ordinary solder one of the pieces of metal is heated to a red-heat. A composition is then spread on it, consisting of 1 kilogramme (say 2 lbs. 3 ozs. 4 dwts.) of the filings of iron or steel, 100 grammes of salt of ammoniac, 60 grammes of borax, 50 grammes of balsam copiaba, or copaiba. The whole is calcined, and reduced to fine powder. Then the second piece of metal is taken and heated to a white-heat, and immediately placed on the first piece, and they are then welded together.

Street-lamps do not often form the subject of Letters Patent, though an application was once deposited for a travelling apparatus for lighting street-lamps; however, a patent has lately been taken by J. WILSON, for street-lamps. The specification has been lately filed. The invention consists in forming the lamps without a side-frame, the top being supported and secured to the bottom by two small rods of iron, secured to the top part of the lamp-post. The edges of the glass sides join each other, and are kept in their places by the rebates formed in the metal, at the top and bottom only of the lamp, thereby causing no shadow on the ground below, and increasing the light.

Among recent Applications for Patent occur—DAVIES, London (communication from Maurice, Paris), purifying smoke.—CAMBRIDGE, Bristol, fire-bars, and manufacturing iron.—KIRK, Glasgow, blowing-engines.—LAKE, bricks (communication from Douglas, Chicago).—ROCHUSSEN, London, armour-plating of ships and fortifications.—The BISHOP OF KINGSTON, Jamaica, is among recent applicants for patents.—DAWES, West Bromwich, iron.—BOYD, Low Walker, screws for armour-plates.—HEAD, Stockton-on-Tees, rolling iron and steel.—GREGORY, Ardwick, grinding and polishing metal.—CROCKFORD, Holywell, obtaining products from materials produced in galvanising iron with zinc.—ALEXANDER, Liverpool, coatings for metals, &c.—Rev. J. OAKDEN and J. PICKIN, Congleton, enamelling metal and stone.

FOREIGN MINING AND METALLURGY.

The report emanating from the directors of the General Company for Promoting the Development of Commerce and Industry in France states that the Mockta-el-Hadid Magnetic Iron Minerals Company has, thanks to the working of its mines in Algeria, been able to meet the interest accruing on all the capital engaged in the enterprise. There is still no improvement in the position of French metallurgical industry; its inactivity is perpetuated. At St. Dizier charcoal-made pig has made 4*l.* 9s. 6d. per ton, on which terms a few contracts of some little importance have been concluded. Rolled iron, from charcoal-made pig, is quoted at 8*l.* 16s., mixed ditto at 8*l.* 8s., and coke-made at 7*l.* 12s. per ton, without business. In the Moselle district refined pig is run off tolerably easily; some works only are burthened with stocks, others have orders which engage their production for several months to come. Prices remain at 2*l.* 17s. 6d. to 2*l.* 19s. 2d. per ton, according to quality. Rolled iron has given rise to no transactions, and prices are only sustained by a common agreement on the part of the principal producers of the group. Dividends are payable as follows:—Mockta-el-Hadid Iron Minerals Company, May 1, at the rate of 5 per cent. on the share capital; Dourges Coal Mines Company (Pas-de-Calais), 8*l.* per share for the exercise 1866; Rive-de-Gier Collieries Company, April 16, final dividend for the exercise 1866, of 4s. 8*d.* per share; Loire Mines Company, April 16, balance of the dividend for 1866, or 6s. 6d. per share; Montrambert and Béraudière Collieries Company, April 16, balance of the dividend for the exercise 1866, or 5s. per share; and Bouches-du-Rhône Collieries Company, May 1, half-yearly coupon of 12s. Meetings are announced as annexed:—Deneuville Mine Company, April 24, at Paris; Belmez Colliery and Metallurgical Company, April 25, at Paris; Bouilladisse Mines Company, April 25, at Paris; Denain and Anzin Blast-Furnaces Company, April 26, at Paris; Bert and Montcombroux Mines Company, April 29, at Paris; Cauchy-à-la-Tour Colliery Company (Pas-de-Calais), April 30, at Lilliers; Commentry Collieries and Fourchambault Forges and Foundries Company, April 30, at Paris; Mangède Collieries Company, April 30, at Paris; and Auriferous Company of Réunion, May 10, at Paris.

Some orders from abroad have revived the activity of some of the metallurgical works of the Charleroi group. But this assistance, however favourable it may be at a moment when transactions are rare and difficult, has not had the effect of changing the general state of the Belgian markets, which remains the same. Prices continue to be unremunerative, especially of pig, which suffers a good deal from English competition. The *Revue Industrielle de Charleroi* argues, however, that the competition of the English blast-furnaces is less to be feared by Belgian forgemasters than is generally believed. The *Revue* says:—"The puddling of English pig, when compared with that of Belgian pig, costs at least 8s. more per ton of iron than the puddling of Belgian pig. In the same space of time, and with the same quantity of coal, nine charges are made with Belgian refined pig, while only eight are made with English pig. As regards the quality of the iron obtained with English pig, it is below the average obtained with ordinary Belgian pig. The low price of English refined pig may induce some of our works to try it experimentally, but we believe they will stop there, and that in the end they will consume only Belgian pig. However this may be, the importations of English pig, which are being made into Belgium, are on a considerable scale, and with the majority of the blast-furnaces stocks are increasing. Further extinctions of blast-furnaces are even spoken of; the concerns most prominently mentioned as likely to carry them out are the Châtelineau Company and MM. Mineur, Demoustier, and Co. Nothing definite has, however, been yet determined on. The Chevalières à Dour Collieries Company will pay, April 30, a dividend of 2*l.* per share, in respect of the exercise 1866. The Sacré Madame Colliery Company is distributing 8*l.* per share as the dividend for 1866. The Monceau-Fontaine and Martinet Collieries Company will pay, May 1, the dividend for the exercise 1866. Meetings are announced as follows:—Basse-Sambre United Collieries Company, April 20, at Tamines; Mulheim-sur-Ruhr Colliery Company, April 27, at Brussels; Sars-Longchamps and Bouvy Collieries Company, April 25, at St. Vaast; Belgian Collieries Company, April 28, at Mons; Silesian Mines and Ironworks Company, May 4, at Breslau; Sambre and Meuse Mines and Ironworks Company, May 6, at Brussels; Niederfischbach Mines and Foundries Company, May 6, at Brussels; Grand Mambourg-Sablonnière Collieries Company, May 11, at Montigny-sur-Sambre.

Since the arrival of the mail from the Southern Seas, announcing small deliveries, business has slightly hardened on the Havre market; at the same time, purchasers appear to be in no hurry, and an advance would check business. Disposeable is dealt in at 73*l.* to 73*l.* 10s. per ton; for delivery at the close of May the sale is noted of 50 tons, at 75*l.* per ton. The stock of copper on the Havre market was divided at the close of March as follows:—United States, 98 tons; Chilian in bars and ingots, 600 tons; ditto in minerals, 150 tons; ditto, from various sources, 100 tons: making a total of 5248 tons, or of pure copper about 4950 tons, against 4700 tons Feb. 28, 1867, and 3950 tons March 31, 1866. The Paris market remains quiet; affairs during the past few days have been almost *nil*. English in plates is quoted at 79*l.*; rough Chilian at 74*l.* to 74*l.* 10s. per ton; while Corocoro mineral has made 80*l.* per ton. Copper has been neglected at Marseilles, and has tended downwards. Toka is quoted at 78*l.*; Spanish at 76*l.*; refined Chilian and Peruvian at 84*l.*; rolled red copper for sheathing at 96*l.*; and yellow, ditto, at 84*l.* per ton. The Cologne and Berlin markets have shown little animation; prices have remained without variation. At Hamburg copper of choice quality has been more sought after; on the other hand, ordinary marks are neglected, and display a downward tendency. The tin markets have been quieter since the last public sales. According to the reports received from Amsterdam and Rotterdam the demand has considerably slackened; nevertheless, Banca has maintained itself at the previous selling price; the quotation for short-termed deliveries being 53¼ to 53¾ fls.; Billiton, of which 800 blocks have changed hands at secret prices, is quoted at 53 fls. The Paris market for tin has been inactive, and prices have been less firm; Banca has made 98*l.*; Straits, 94*l.*; and English, 99*l.* per ton. At Marseilles, the article has regained favour; 98*l.* per ton has been paid for Banca. On the various German markets the demand is not so active; prices generally have been less firmly sustained. Lead has maintained itself at nearly the same rates on the German markets. Berlin advices report considerable purchases of Saxon and Tarnowitz. At Hamburg there have been no great transactions, and prices have scarcely changed. The demand at Marseilles has shown little activity; lead in sammons, first fusion, has brought 18*l.* 14s.; ditto, second fusion, 18*l.* 10s.; lead in shot, 20*l.*; . . ned and in pipes, 21*l.* 8s. At Paris affairs

have been very moderate; rough French has made 20*l.*, and Spanish 20*l.* 8*s.* per ton. At Rotterdam, Stolberg and Eschweiler have made 11¼ fls., and miscellaneous German marks 11 fls. The Breslau zinc market has remained quiet, and has presented only a secondary interest; the works, nevertheless, maintain their prices without abatement. The Hamburg market has been inactive. At Paris the article has varied but slightly, notwithstanding the absence of affairs. Rough Silesian zinc has been quoted by continuation at 22*l.* 16*s.* per ton.

In dealing with French affairs we should have noted that the Rive-de-Gier Collieries Company realised in 1866 a profit of 27,328*l.*, increased to 31,346*l.*, with the addition of a balance brought forward from 1865. On the recommendation of the council of administration, the sum distributed to the shareholders for the past year is 25,600*l.* The dividend for 1866 on each share is 6*s.* 8*d.*, of which 4*s.* 8*d.* is now being paid. A sum of 2800*l.* was charged against last year's revenue, in redemption of capital expended in works, and a balance of 2906*l.* has been carried forward to the credit of 1867. The Orleans Railway Company owns a mining and metallurgical property at Aubin, in which capital has been embarked to the extent of about 500,000*l.* The directors, in their report for 1866, state that the extraction of coal during the year amounted to 194,694 tons, of which 43,200 tons were consumed by the company's traction service, while 16,100 tons were sold, the remainder being employed at the company's forging establishment. The production of 1866 was 17,500 tons below that of the preceding year. This arose from a certain number of accidents which happened in the mines of La Pelonie, which rendered the working difficult; the cost price of the coal obtained experienced, however, a sensible improvement during the year. The forge is now in a satisfactory state; the tools are complete, and the number of improved coke-furnaces now suffices for the entire fabrication. The quantity of rails manufactured last year amounted to 22,021 tons. The metallic mines at Aubin continue to yield satisfactory results; they produced last year 292 tons of argentiferous lead minerals, which were sold to the trade.

COAL ASH UNDER THE MICROSCOPE.

Mr. J. B. DANCER read a paper at the Manchester Literary and Philosophical Society on the microscopal examination of coal ash or dust from the flue of a furnace, illustrated by the microscope. He said: When coal is burnt in a furnace to which atmospheric air has free access, a portion is converted into gaseous and volatile matter, and the incombustible substance which remains is the ash. The amount of ash in coals from different localities is very variable; it is said to range from 1 to 35 per cent. The ash or dust, which is the subject of this paper, was collected from the flue of my steam-boiler furnace, in which common engine coal is used as fuel. This coal leaves a considerable amount of incombustible matter. A specimen of the dust presented is of a reddish brown colour, and free from soot or carbonaceous particles. When this dust is examined under the microscope with a power of 40 or 50 diameters, it is found to consist of ferruginous matter and crystallised substances, some particles transperent, others white and red. It contains also a number of curious looking objects, which vary considerably in size and colour; the majority of these bodies are spherical, and when separated from the irregularly shaped particles forming the bulk of the dust they become interesting objects for the microscope. I shall confine my remarks more especially to these globular bodies. Some of these are as perfect in form as the most carefully turned billiard balls, and have a brilliant polish. The various colours which these globules exhibit give additional interest to their examination. Some are transparent crystal spheres, others are opaque white, many are yellow and brown, and variegated like polished agates or cornelian of different shades. The most abundant of the highly-polished balls are black; there are others which look like rusty cannon balls—some of these have an aperture in them like a bombshell, and many are perforated in all directions. To obtain these objects, the dust should be washed in a bowl, and all the lightest particles allowed to float away; the remainder consists of fragmentary crystalline and ferruginous substances; mixed with these are the polished balls described, which, under the microscope, by a brilliant reflected light, look like little gems. To separate the spherical bodies from the irregular ones, it is only necessary to sprinkle some of this material on an inclined glass plate, and by gentle vibration the balls will roll down, and can thus be collected. Having satisfied ourselves with the examination under the microscope, it is natural that we should desire to know more about these novel objects, What is their elementary constitution? Why are they spherical? How do they get into the flue? I have not attempted a chemical analysis of these minute bodies, many of which are less than the hundredth part of an inch in diameter. I can only, therefore, offer an opinion as to their probable constitution, judging from what is known of the chemical analysis of coal ash, and from the appearance they present under the microscope.

Referring to the chemical analysis of coal ash, we find that it sometimes contains silica, magnesia, alumina, sesqui-oxide of iron, lime, soda, potash, sulphate of calcium, anhydrous sulphuric acid, anhydrous phosphoric acid, sulphur, and sometimes traces of copper and lead. The vegetable origin of coal is now generally admitted, and doubtless some of the substances I have just named have been taken up by the coal plants, whilst other portions may have collected in the locality where the coal was formed. As this is not immediately connected with our present enquiry, I proceed to speculate as to the constitution of these globular bodies. The transparent spheres I imagine to be silicates of soda or potash; the opaque white are most likely silicate of soda or potash, combined with lime and alumina; the yellow and brown are silicates coloured by iron in different proportions. The black globes are not all alike in composition; some of these are silicates coloured by carbon, others are iron balls coated externally with a silicate. Many of these rusty cannon balls are probably ferrous oxide, formed by the action of heat on the iron pyrites in the coal. There are also balls of black magnetic oxide. The perforated shells are probably ferrous sulphides. The globular form of these bodies suggests that they have been thrown off in scintillations, such as are seen during the combustion of iron in oxygen gas, and whilst a fluid state they assume a spheroidal form. They are carried by the draught into the flue, and being of greater specific gravity than the carbonaceous matter forming the smoke, they fall before the current of air has reached the chimney. Some of the dust has been a considerable time in the flue, exposed to the intensely-heated circulating flame; the reducing action of this would probably convert some of the oxide into metallic iron. Many of these balls have the appearance of reduced oxide. The flue dust contains a larger amount of ferruginous matter than can be accounted for by the analysis of coal ash. I think the surplus may be regarded as representing the wear and tear of the iron work about the furnace, such as fires-bars, boiler-plates, &c. The brickwork and cement about the boiler and flues may also supply some of the silica, alumina, and iron for these balls, numbers of which are merely thin shells. The movements of these objects, caused by the approach of a magnet under the stage of the microscope, are somewhat amusing, and it is at times startling to see the crystaline objects, both spherical and irregular, exhibit magnetic attraction. Probably they contain particles of iron imbedded in them; if they do not, may we not imagine that there is some magnetic compound in which the crystaline matter predominates? When we consider the accidental condition under which this matter has combined, it is just possible that some new molecular arrangement or combination of elements may have taken place. It is very probable that many of these polished balls are much more complex in their elementary constitution than I have stated. They are, in fact, a kind of glass; and many of them merely bulbs. Clemandot states that glass is probably an indefinite mixture of definite silicates. Bottle glass, containing small quantities of ferrous oxides and sodic sulphates, when exposed to sunlight becomes yellow; and possibly some of these balls may have changed in colour since they came from the flue. Hydrochloric and nitric acid exert very little action on the ferruginous globes; this may be due in some measure to the high temperature at which the oxides have been formed; in other cases they are, no doubt, protected by an external coating of some silicate. It would require much time and patience to collect a sufficient number of each kind of these minute objects for a chemical analysis; but the spectroscope might probably assist in revealing their constitution.

PREVENTION OF STEAM BOILER EXPLOSIONS.—In a highly interesting communication addressed to the *Scientific American* by Mr. J. S. EBAUGH, of Beardstown, Illinois, he states that—In an experience of about 18 years, and with pretty close observation of causes and effects, I think I have demonstrated that boiler explosions result from two common, plain, and simple causes, and if there is any mystery about the matter with me, it is that explosions are not many times more numerous. The first of these causes is simply the severe tests boilers are subjected to daily and hourly in ordinary usage, not intentionally, but from want of knowledge of causes and effects. To explain: it is, and always has been, a common practice in feeding or supplying boilers to discharge the feed pipe into the under side of the after end of the boiler, or into a receiving drum, which discharges in the same place. This feed water, though always intended to be comparatively hot, is not always so; on the contrary, it is sometimes tolerably cold. Now, all boilers under a pressure of steam are fully expanded, and as a matter of course, if supply or feed water is discharged comparatively cold, as it is usually, on the bottom shell of the boiler, it must produce a sudden contraction of the part so cooled, and if the iron is not very soft and tough the sheet will tear apart, sometimes in the middle, sometimes in the lap between rivets. This I have known very many times to the extent of 10 to 15 in. This you will see is a good part for an explosion, provided, of course, the boiler is carrying a fair working pressure of steam, and, as is almost always the case, the iron in two-thirds of the circumference of the shell is no better than that already broken. The second great cause is the carbonised, hardened, brittle condition of that portion of the shells of boilers exposed to a very intense heat, and this heat, as is usually the case, generated with coal more or less impregnated with sulphur. Under these circumstances boilers in use from six months to two years always become more or less carbonised, or hardened and brittle, and will not stand the test of sudden contraction by cooling parts, as above described. It sometimes happens that even in new boilers, or parts of them, is more or less hard and brittle, and, of course, in a measure liable to the same misfortune under the same circumstances as before described. Now, when we add to the other two causes, and in combination with them, the carrying by engineers of all the pressure allowed by law, and sometimes a good deal more, it is certainly not strange that explosions so frequently occur, for we have here all the causes in combination to produce that effect, and the wonder, as I before stated, is that explosions are not many times more frequent. I am satisfied, however, that very many explosions have occurred with only an ordinary working pressure, and mainly from the first two causes—namely, sudden contraction of parts of the shell, and the hard and brittle condition of the iron. I promised a remedy, and here it is. Some year and a half since I was repairing a boiler that had been blown up by the explosion of another alongside of it. We found the iron so hard and brittle that we could not punch or bend without breaking it. Finding it impossible to do anything with it in that state, and knowing I could not make it worse, I suggested to Mr. Webb, my foreman, the idea of annealing it, which he did, and with the most signal success,—nothing less than completely restoring the iron to a uniform soft and tough state, and I think better than it ever was before. Since that time I have annealed all the boilers I have used, with the same success. This annealing process is simple, cheap, and safe, loosening not one seam or rivet, and consists merely of draining the boilers dry when in the furnace, then firing up with dry coal until the boilers are barely red hot, then cooling as gradually as possible, and the thing is accomplished. In conclusion I will say that all new boilers, no matter how good the iron, should be annealed. It will in any case give to all the plates a uniform toughness and temper. I will say further, that with careful superheating of feed water before it can touch the shell of the boiler inside, and with the annealing process, which should be repeated every six months, boiler explosions will be things of the past. This sudden contraction of parts of boilers is caused sometimes by cold water, or cold blasts of air, coming in contact with the outside shell, with more or less the same effect. Of course, care should be taken to keep water well over the flues, to prevent them from heating and collapsing.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

GREAT WHEAL VOR UNITED.—Very considerable improvements have taken place at Wheal Metal during the last week. The most important are in Ivey's shaft, now worth 40*l.* per fathom; and the lode has been cut in the bottom of Edward's shaft. The mine is opening out well again.

EAST WHEAL LOVELL has so far improved that the present aggregate value of the different points of operation is no less than 220*l.* per fathom, The eastern end of the south lode is worth 35*l.*, the western end 80*l.*, and in the bottom of the 40 from 50*l.* to 60*l.* per fathom. The north lode west, in the 45, 20*l.*, and east 25*l.*

NORTH WHEAL CROFTY has considerably improved during the past few days. The lode, which in the 183 east was valued at 40*l.*, is now worth no less than 60*l.* to 65*l.* per fathom. The prospects of the mine were never more encouraging than at the present time.

WESTMINSTER.—The agent reports the lode in the eastern shaft as worth 1 ton of lead ore per fathom. It is a very strong lode, and will doubtless produce a large quantity of ore. As anticipated the water has entirely disappeared from this part of the mine, and the company is actively engaged in opening it out. In the western, or old mine, there is a gradual, though small, diminution of the water, which would tend to show that the deep level was having an effect here also. This was quite unlooked for, and will tend materially to lessen the labour of the new engine, the works for which are proceeding rapidly.

NORTH WHEAL CHIVERTON.—There is a rich silver-lead lode now in the 80, worth in places 15*l.* to 25*l.* per fm.

GREAT WHEAL FORTUNE.—The lode in Hosking's shaft continues to improve. The new lode is quite as good as reported at the meeting. This mine holds out great promise of again becoming profitable. Shares are in demand in the district.

CHIVERTON MOOR, AND CHIVERTON VALLEY.—It is well known that the owners of Chiverton Valley sett place a very high value on it. Now, this is an important fact for the holders of Chiverton Moor, for the very simple reason that their sett lies between West Chiverton and Chiverton Valley; and as the richest courses of ore in West Chiverton are fast dipping towards Chiverton Moor, into which its lodes run direct, it would be strange indeed if Chiverton Moor did not stand the best chance, on the good old principle of "first come first served." Without wishing, therefore, to depreciate Chiverton Valley, it may fairly be said that if that sett is valuable Chiverton Moor stands a good chance to be better. It is no longer a "chance," however, as the position of Chiverton Moor shows plainly enough that it is quickly about to prove a worthy child of its noble parent.

WHEAL AGAR.—Captain Rogers's recommendations are being vigorously carried out. The water will be drained from the 150 fathom level in about a fortnight, when the 150 can be driven under a very promising and profitable lode. Undoubtedly this mine promises to become the great prize of the district this year: 150 tons of tinstuff were sampled last week.

At GREAT RETALLACK a fine discovery has been made during the week at the shaft sinking upon the No. 2 lode. The shaft is now down to the 10, and driving north and south has been commenced. In the south part of the shaft the lode, for 2 fms. in height, is worth at least 2 tons of lead per fathom, and in the bottom of the shaft the lode will produce 1½ ton of lead per fathom. The lead is dipping north, and, therefore, the shaft is not yet deep enough for the main part of the bunch.

The discovery in Great Retallack is of the greatest importance to NORTH RETALLACK, as the ore is dipping north, or into the latter sett. The adit level at Great Retallack is now within a few fathoms of the boundary, and the lode having all the characteristics for a bunch of lead. The North Retallack adventurers may congratulate themselves upon possessing a property having a run of upwards of ½ mile on the Great Retallack lodes, and which may be worked under peculiar advantages.

[ADVERTISEMENTS.]

From Mr. JAMES CROFTS:—The Stock and Mining Markets still continue in a state of depression, and a further abstraction from business of all kinds will take place by medium of the holidays, which are becoming more and more every year a British institution. Thus, when there will be few readers, the writer may be brief. Much agitation has been caused in the mining market by an adverse report on PRINCE OF WALES MINE, supposed to have been written about six weeks ago, when the lodes were not in so advanced a state as they now are, and, therefore, inapplicable to the present moment. One item in this report favours the supposition that it was published for a purpose—namely, it begins, "Yesterday, I thoroughly inspected this mine," to make which beginning intelligible a date should have been given, but is *non est*. The "Country Speculator," who ushers in this report, with his remarks thereon (it is not intended to doubt that the party who wrote this introduction is any other than a "Country Speculator"), but inasmuch as it is "not usual" (as Mr. Buckstone, the actor, has said) "for people to depreciate their own mackarel," it is rather odd that a shareholder in any mine should publish a report of a character highly adverse to his interests, being depreciatory of his shares in the mine. Some shareholders would have pocketed the affront by selling their shares, and keeping silent as to the why and wherefore. On the whole, the matter introductory to the report would be rather amusing than otherwise, were it not that many other "speculators" in Prince of Wales shares have suffered a heavy loss by it, not less, indeed, than 2000*l.* to 3000*l.* of sterling British money, and much good may it do those who have gained it.

THURSDAY, FOUR P.M.—*Telegram* (official): Mine improved to 225*l.* per fathom. Sale of ore 153 tons, realising 1125*l.*

From Mr. EDWARD COOKE:—There has been rather more business doing, with a fair demand for West Chiverton, Chiverton Moor, North Crofty, Great Retallack, Great Laxey, and North Wheal Chiverton shares. The share list for the latter was closed on Wednesday last. The applications for shares were not only numerous, but the applicants consist of parties of the highest standing in the commercial world, and I have not the least doubt but that NORTH WHEAL CHIVERTON will prove one of the greatest successes that Cornwall has produced, and I still advise the shares being bought while they are at a very reasonable price, as I feel confident they will attain a very high price during the present year. There is everything at present to indicate this being the case. In addition to ample capital now in hand to develope the mine for 12 or 18 months, there are already three places in the 80 producing respectively 4 cwts., 6 cwts., and 18 cwts. of silver-lead ore per fathom. The Chiverton district may be termed the most important lead-bearing district in Cornwall, and North Wheal Chiverton is likely to prove another great mining prize in this splendid district. When writing on NORTH WHEAL CROFTY, last week, I felt certain that the decline in the price of shares would be only of a temporary character. Whoever avail themselves of the present decline, and buy the shares, will be enabled to realise a large profit before many weeks have elapsed. No one, I believe, who knows North Wheal Crofty entertains the least doubt of its becoming one of the greatest tin mines in Cornwall. I say again to all my readers, buy North Wheal Crofty shares.

At WEST CHIVERTON a branch of lead has been met with in the 110 valued at 15*l.* per fm. It will be remembered that in the upper levels a similar branch of lead was met with previous to the lode being intersected. This branch of lead is more valuable than it was in the levels above, thus indicating that a very rich lode in this (the 100) will be met with, and thus still enhance the value of this splendid mining property, and tend also to increase the dividends. At CADEBECK FELLS MINE several very important improvements have taken place, particularly in the 30 and 60. Had this company not suffered so much in reputation by the late defaulting secretary the shares would now be standing at a considerable premium, instead of at 75 per cent. discount. From the present respectable and efficient management the result will, by-and-bye, be highly satisfactory to the shareholders, and the shares will, doubtless, be better appreciated. Owing to the general depression existing in all branches of business the price of tin has not proved an exceptional case, it having receded during the past week. With a slight revival in trade tin would soon recover from its late decline, as the stocks on hand and current supplies are of rather a limited character. For some specious purpose a report on the PRINCE OF WALES MINE was inserted in last Saturday's Journal. It would only have been fair if the date of the inspection had been stated in the report. Without wishing to detract from the abilities of the author of the report in question, who, doubtless, gave his opinion to the best of his judgement, there are instances on record where great reputed mining authorities have seen results prove very contrary to their expressed opinions of the merits of mines, and it it is not improbable that the results of the development of the Prince of Wales Mine will prove that the opinion of the company's manager is as much to be relied upon as that of casual Inspectors of the mine, however high they may stand in public estimation.—GREAT WHEAL VOR: The improvements that have taken place in this mine at Ivey's and also at Edward's shaft recently, encourages the expectation that this company will returned to a similar prosperty to that it enjoyed some years since.

From Messrs. WARD and JACKMAN:—In the Mining Share Market the late excitement has been succeeded by comparative duiness, not that the mines are looking worse, on the contrary, many improvements have taken place. Speculators realising their profits—tin further declining—and the Easter holidays also commencing—have caused many shares to recede. It is very probable, therefore, that in a few days, when the "bulls" and "bears" return from their short relaxation from business, like giants refreshed, an active business may again commence. Among those mines in which important improvements and discoveries have been made this week may be mentioned EAST RUSSELL and GREAT RETALLACK. We remarked in the Journal of April 6, respecting the former mine:—"The only cause for the flatness in East Russell shares is the delay in cutting into the lode again east of the slide in the 140 being longer than was anticipated, but this is daily expected to be accomplished, when the rich lode reported on by Captain Richards as worth 25*l.* per fathom will again be driven on." These remarks are now fully borne out by the fact that the lode is now valued at from 25*l.* to 30*l.* per fathom. At Great Retallack, the shaft on No. 2 lode is now down 10 fms. below the adit, and driving north and south has been commenced. In the southern end the lode is worth 2 tons of lead per fm., and the lode in the shaft 1½ ton. The lead appears to be coming in from the south, and dipping north, consequently the shaft is not yet deep enough to take the main body of the ore. As the sinking to the 20 will be immediately resumed, a further improvement may be looked for, and the ground is so easy that rapid progress can be made, the highest price paid for driving being only 25*s.* per fm. The sampling at West Seton yesterday was 506 tons.

CHEMISTRY FOR PRACTICAL MEN.

There are but few subjects of study of greater utility to practical men, no matter what may be the branch of industry with which they are especially connected, than Chemistry and Chemical Physics, and so great is the inconvenience very generally felt in the course of their ordinary business by those who lack the knowledge, that enquiries for a means of remedying the deficiency are very frequent. During the past year a work has been issued by Profs. Morton and Leeds,* of Philadelphia, which appears precisely to meet every requirement. The object of the authors has been to produce a book of practical use to the student, by furnishing him with clear and simple explanations of the subject, and to those more proficient in scientific learning, by giving them in small compass convenient memoranda of important facts, numbers, references, &c., and this object has certainly been most completely attained. The position of Prof. Morton, as resident secretary, and chief editor of the Journal of the Franklin Institute, has, no doubt, given him unusual opportunities for knowing and recording whatever progress may be made from time to time in the scientific world, and that these opportunities have been availed of the book now under consideration gives ample evidence.

The authors tell us that in the explanation of the laws and theories mathematical precision of statement has been less studied than the expression of a clear idea in such form as would be readily apprehended by one not previously conversant with the subject, yet quite as much care appears to have been taken to secure accuracy as in any text-book which has preceded it. There is no want of precision, unless the use of language intelligible to the general reader, as a substitute for the purely technical expressions with which many similar works are overcrowded, be taken as such. Notwithstanding the vast amount of information given, and the almost innumerable illustrations employed to assist the elucidation of the several parts of the subject, the volume only extends to about 300 pages, of which two-fifths are devoted to Chemical Physics, and the remainder to Chemistry. In the department of Chemical Physics, the general properties of matter, the mechanical forces, heat, light, and electricity are each treated of at quite sufficient length to enable the student to obtain a fair insight into the subjects; and the first six or eight pages of the second part—Chemistry—will not only prevent subsequent confusion in the minds of those using the book as their first instructor, but would prove of immense advantage to many who have made a certain amount of progress in the science, by enabling them to express themselves with precision, instead of in the confused and unintelligible manner now so frequent. The portion devoted to Organic Chemistry, of course, contains only such portions of the subject as are likely to be required by the practical man, the subject being treated under the heads of saccharine and amylaceous bodies ethyl, methyl, &c., vegetable acids, vegetable bases, oils, cyanogen, organic colouring principles, and albuminous bodies. The reader may thus get all the great facts which are necessary to be known by those engaged in such occupations as sugar refinery, soap and candle making, the manufacture of coal products, and so on, without having to go so deeply into the various theories as to become impressed with the feeling that the whole science is nearly incomprehensible, and unworthy of the trouble involved in mastering it.

From Profs. Morton and Leeds' book a sound and reliable outline of the several branches of the sciences treated of may be easily obtained, whilst those outlines will be so systematically arranged in the mind that details, even the most minute, may be conveniently and satisfactorily filled in at any future time, without effacing, or even rendering less vivid, the impressions already made.

* "The Student's Practical Chemistry: a text-book on Chemical Physics and Inorganic and Organic Chemistry." By H. MORTON, A.M., and ALBERT R. LEEDS, A.M. Philadelphia: Lippincott. London: Trübner.

LUBRICATING OIL AND GREASE SUPERSEDED.—The inconvenience attending the use of fatty matters generally for lubricating purposes is well known, yet oil and grease have hitherto been accepted as necessary evils; the Patent Plumbago Crucible Company, however, have now introduced, under the name of anti-attrition powder, a material which appears to consist principally of finely-ground plumbago, which overcomes all objections; it is impalpable, perfectly free from grit, and hence there is no fear of its cutting the machinery, but, on the contrary, will polish and cleanse it. As compared with oil or grease, the anti-attrition powder has many advantages; for instance, it is impossible for it to work into ridges. Further, it will not catch the dust and hard atoms that may be flying about, as grease does, and it will wear for a great length of time. Having an affinity for metals, the powder fills up the pores, and thereby keeps them cool, and on coming into contact with a body it adheres to it. The fact that the Ebbw Vale and Wigan Coal and Iron and Clay-lane Iron Companies are using it for blast-engine cylinders, and that Messrs. Platt Brothers and Co., of Oldham, have introduced it for ordinary machinery is a sufficient guarantee of its merit. The anti-attrition powder is equally applicable to slow and quick running shafts, and for dusting over the moulds for iron castings, and has already been largely used for that purpose in connection with the manufacture of Bessemer steel.

IMPROVED STEAM-BOILER.—An improved separable boiler, if the term can be applied, has been invented by Mr. A. HITCHCOCK, of Pine-street, New York, by which the flues may be scaled easily and completely, and such parts as are otherwise inaccessible, without taking the boilers to pieces, may be readily repaired. The shell is furnished with flanges at each end, one being placed in the interior, and the other on the exterior of the boiler; the flues are rivetted in the usual way to the heads, which are made to fit the flanges. On removing the bolts, which secure the heads to the flanges, the smaller head may be drawn through the boiler, thus withdrawing the flues from the shell. A roller placed in the flue near the inside and smaller head facilitates the passage through the shell. The attention of the miner is particularly called to this boiler, where he gets all the advantages of a tubular boiler and cylindrical boiler combined. It is made to set in a common brick arch, like an ordinary cylindrical boiler, and the fire may be returned through the flues as often as required; and in case of an accident or failure of one of the flues, a common blacksmith can take out the flue and repair it, substitute a new one, or leave out the flue altogether, and stop up the holes with a "patch" on each head, and the boiler is ready for use again, which saves time and money, as compared with the present mode of constructing flue boilers.

DISTILLING PARAFFIN.—Messrs. W. HOLMES and J. W. PERKINS, Gracechurch-street, propose to take the usual flated hemesphirical still, and in the interior thereof to fix about midway a charging pipe to which is attached a self-acting cock, while the neck of the still is carried through an intermediate condenser, and to which the charging pipe is also attached. The condenser is provided also with a self-acting cock to receive and maintain the charge, so as to supply the still and maintain one uniform level while at work with boiling oil. At the bottom also is placed a pipe for the removal of any water that the oil may contain, and thus prevent fouling and explosions. In the interior of the still is also placed a pyrometer, self-acting, so that when the boiling point has risen to any point previously determined on any further supply may be and is cut off. The condenser being charged with oil charges the still and maintains the charge at the same level, thus obviating any burning or discoloring of the oil, and requiring a little or no attention.

WELDING IRON AND STEEL.—Mr. B. Lietar, of Rue du Houblon, Brussels, proposes to employ a composition made as follows for the welding of iron and steel:—He takes of iron or steel filings 100 parts; sal ammoniac, 10 parts; borax, 6 parts; balsam of copaiba, 5 parts. These ingredients are to be calcined and reduced to powder, and the composition is spread on the surfaces, previously properly heated, to be welded.

ALLOYED METALS.—The following are particulars of the composition of a few of the alloys commonly used in the arts:—

CHINESE WHITE COPPER.—Copper, 40·4; nickel, 31·6; zinc, 25·4; and iron,	[2·6 parts.
MANHEIM GOLD.—Copper, 3; zinc, 1 part; and a small quantity of tin.	
BATH METAL.—Brass, 32; and zinc, 9 parts.	[3; and tin, 4 parts.
SPECULUM METAL.—Copper, 6; tin, 2; and arsenic, 1 part; or copper, 7; zinc,	
HARD SOLDER.—Copper, 2; zinc, 1 part.	
BLANCHED COPPER.—Copper, 8; and arsenic, ½ part.	
BRITANNIA METAL.—Brass, 4; tin, 4 parts; when fused, add bismuth, 4; and	
antimony, 4 parts. This composition is added at discretion to melted tin.	
PLUMBER'S SOLDER.—Lead, 2; tin, 1 part.	
TINMAN'S SOLDER.—Lead, 1; tin, 1 part.	
PEWTERER'S SOLDER.—Tin, 2; lead, 1 part.	
COMMON PEWTER.—Tin, 4; lead, 1 part.	
BEST PEWTER.—Tin, 100; antimony, 17 parts.	
A METAL THAT EXPANDS IN COOLING.—Lead, 9; antimony, 2; bismuth, 1 part.	
This metal is very useful in filling small defects in iron castings, &c.	
QUEEN'S METAL.—Tin, 9; antimony, 1; bismuth, 1; lead, 1 part.	
MOCK PLATINUM.—Brass 8; zinc, 5 parts.	
MOCK GOLD.—Fuse together copper, 16; platinum, 7; zinc, 1 part.	
RING GOLD.—Pure copper, 6½ dwts.; fine silver, 3⅔ dwts.; pure gold, 1 oz. 5 dwts.—*Scientific American.*	

VOLUNTARY WINDING-UP.—In *re* the United Merthyr Collieries Company (Limited) an applicaton was made to Vice-Chancellor Wood for a compulsory winding-up. But the Vice-Chancellor said he still adhered to the rule he had expressed in another similar case—that there were many matters which the shareholders could manage much better than the Court, and that the Legislature intended that the shareholders should meet and regulate their business by the views of the majority, unless in cases where there had been undue influence, or an over-bearing majority on the part of those whose acts were sought to be impeached. There was no better way of dealing with these matters than leaving them to the control of the shareholders, who were the best judges of their own affairs, leaving the Court only to be applied to when matters of difficulty arose. The voluntary winding-up in this case would, therefore, be continued under the supervison of the Court.

LIABILITY AS CONTRIBUTORY.—In *re* the London, Hamburg, and Continental Exchange Bank, Limited (Evans's case). Mr. Evans had signed the Memorandum of Association for ten shares. He never applied for any shares, none were ever allotted to him, nor was his name ever placed on the register of shareholders. After the directors of the company were appointed, he never acted in any way, nor was treated, as a member of the company. There were, however, always some of the shares remaining unallotted. The case was heard on appeal, by the Lords Justices, by whom it was held that it was the duty of Mr. Evans, under section 25 of the Companies Act, 1862, as one of the interim directors of the company, to have placed his name on the register of shareholders in respect of the ten shares, and consequently that he must be placed on the list of contributories in respect of those shares.

HOLLOWAY'S OINTMENT AND PILLS.—The family medicine chest that is furnished with these powerful remedies needs, nothing more. Indigestion, general debility, liver complaint, eruptions, sores, wounds, ulcers, tumors, &c., are infallibly cured by their use. They purify the blood, and give tone and vigour to the whole system. This ointment, when well rubbed into the parts affected, enters the flesh just as salt enters meat; and if the pills are taken as an auxiliary, the cure is speedy, thorough, and permanent. These medicaments are composed of rare balsams, without the admixture of a grain of mercury or any injurious substance. They are peculiarly mild and gentle in their action, and are as safe as they are efficacious.

Mining Correspondence.

BRITISH MINES.

ABRAHAM CONSOLS.—J. Vivian, April 18: No alteration to report this week—the same as last week. We shall sample our tinstuff this day.

BALLACORKISH.—M. Grose, April 16: We have about 150*l.* worth of ore dressed ready for the market. We are pushing the cross-cut east in the 24 with all possible speed, but cannot put on any extra force, in consequence of the air being so dead. The stope in the sole of the 12 is yielding about 15 cwts. of ore to the fathom. I have nothing of importance to communicate since my last. The ground in the engine-shaft continues tolerably favourable, and the men are making good progress with the sinking, and I trust it will not be long before we reach the 36. The ground in No. 2 winze is pretty fair for progress, and I am in hopes we shall soon hole to the cross cut in the 24, which would at once give good ventilation.

BEDOL-AUR.—H. R. Harvey, April 17: There is no change to notice in the shaft; the swallow continues large, and takes all the water easily. Jones's pitch is not looking quite so well, still it is yielding about 10 cwts. per fm.; other parts of the mine without much alteration.

BLACK CRAIG CONSOLS.—J. Smitham, April 13: The lode in the 54, driving east on Harriet's lode, has improved for lead, and is producing from 18 to 20 cwts. of lead per fm., and still looks well for a further improvement. We cut a heavy feeder of water last night in No. 1 cross-cut north in the 54, west of Harriet's cross-cut, which proves there must be some open ground before us. In No. 2 cross-cut north, in the same level, we cut last night another small branch of lead; I think we must be getting near the main run of lead ground gone down from the level above in this cross-cut.

— J. Smitham, Aug. 16: I should think that we have 9 or 10 tons of lead on the floors partly dressed, and 4 or 5 tons broken underground. The lode in the 54, driving east, on Harriet's lode, is still improving, and will produce to-day 30 cwts. of lead per fm., and still looks kindly for a further improvement. The cross-cut driving south in the 42 west looks very kindly, and we are getting some bits and faces of lead on the rock. In the 54 cross-cut, driving north, there is nothing new.

BRONFLOYD UNITED.—Thomas Kemp, April 17: The stope under the 52 is looking exceedingly well, and is worth from 3 to 3½ tons of lead ore per fathom. The stope west of winze (the 52) is worth 18 cwts. of ore per fm. The stope east of ditto is worth 12 cwts. per fm. The masons are getting on well with the new wheel-pit, and I expect it to be completed in a few days.

BRYN GWIOG.—S. Harper, April 17: I have no alteration to remark in the mine since my last report, with one exception—No. 1 winze, in the bottom of the 75 west, which has greatly improved, now worth 1½ ton per fathom, and likely to continue until we hole the 90. I will send you a full report, together with the plan of the mine, made up to the end of March, for the general meeting next week.

BRYN GWYN.—H. Nottingham, April 16: The level driving south from the middle of incline continuing very hard, I have put the men to drive out in a south-west direction, where we have some soft ground about 2 fms. back from the end; in following this we may meet with a north and south joint, or some easier ground for extending our workings on south. The stem workmen are getting ore in paying quantities about the workings south from the middle of incline, but in no regular course. There are two men trying on tribute in the bottom of incline, east of shaft, and getting a little ore. There is also one in the bottom of the old incline, in addition to the regular number of tributers. The set of tributers in the north part of Field's levels are finding some very fine lumps of ore near Field's rise. There has been but little work done where we made the discovery of ore last month, the men having been engaged sinking a sump on it from the north level to have a better way for bringing out the stuff. We have intersected the joint for which we have been driving the cross-cut west towards Field's levels. There is a little ore mixed through the ground, but not to value; we are now driving on it south.

CAPE CORNWALL.—R. Pryor, W. White, April 17: The lode in the rise in the back of the 90, east of shaft, is worth 10*l.* per fm. The lode in the stopes, east of rise, is worth 9*l.* per fm., and in the stopes, west of rise, the lode is worth 7*l.* per fm. We have cut the lode in the 90 cross-cut, but cannot as yet say much about it. The lode in the 70, west of the shaft, is still producing good stones of copper ore.

CARADON CONSOLS.—S. Bennetts, April 16: The lode in the 90 west is from 2 to 3 feet wide, and worth 5*l.* per fathom. In the 80 west there is but little alteration to notice, very little lode having been taken down during the week; nor has there been any lode taken down in the winze since we passed through the slide. The rise above the 54 is without material alteration. The new shaft continues very wet, and the ground favourable.

CARDIGANSHIRE LEAD.—E. Pearse, April 17: Glan Rheidol Mine: In the 40 fathom level cross-cut, north of the engine-shaft, we have occasional small branches of lead ore dipping towards the lode, which is a good indication. The ground is harder than it has been. In the winze sinking below the 30 there is a good lode, worth 1½ ton of lead ore per fathom. We are not making much progress in this bargain, for want of a sufficient number of men to work it. I hope to get others shortly. The 30, east and west of shaft, is suspended for the present. The lode in the former end is kindly, and will produce a little saving work. In the latter end there is still a good lode, but not quite so rich as when reported on last. We sampled 40 tons of silver-lead ore on the 18th inst., of good quality, and shall soon have a good parcel of blende ready for market.

CARDIGAN CONSOLS.—Henry Boundy, April 16: During the past week the men employed in the 10 have been busily engaged in casing, dividing, putting down footway, &c., at the new engine-shaft, which is now being completed, and we commenced drawing from the 10 this afternoon. As soon as we finish clearing the stuff I shall set the men to open out the full width of the lode. The lode in the 10 east, as far as seen, is worth for copper about 15*l.* per fathom. The lode in the 10 west has yielded a little copper and lead, but scarcely sufficient to value. The rise to meet the air-shaft is now up 9 ft. We have about 5 fathoms more to rise; set to four men, at 7*l.* per fathom.

CLARA UNITED.—J. Davis, April 17: The stopes Nos. 2 and 3, in the 50, are worth respectively 20 and 30 cwts. of lead ore per fathom. The lode in the engine-shaft increases in size, now 6 feet wide, worth fully 30 cwts. of lead per fathom. When the south lode joins the lode now being worked upon I expect the ore will become more solid, it being now a mixture all through. The lode in the west end, in the 40, continues to decrease in value, and as it is now coming into the unproductive ground west of Smithy shaft, we cannot expect an improvement here for some fathoms. As the stopes in back of the 50 are suffering from bad air, I think our best plan will be to suspend the 40 end for the present, and put the men to sink a winze from this level to the 50, as before suggested. The stope in back of the 40 produces 20 cwts. of lead ore per fathom.

CROWAN AND WENDRON CONSOLS.—R. Reynolds, April 17: The shaft is in full course of sinking by eight men; the lode is from 1 ft. to 15 in. wide, yielding some good stones of tin, and I hope ere long to be able to report something cheering from this point of operations.

CUDDRA.—A. Cundy, April 16: There has been no alteration in any part of the mine since last week. Walker's shaft is now down to the 142, and we have commenced to cut the plat.

CWM ERFIN.—April 9: The stope in the back or the 20 fm. level is exhausted, the ground taken away to the bottom of the 10 fathom level. The men are now driving east of this working, about 4 fms. below the 10 fm. level, on a lode 4½ ft. wide, and worth 1 ton of lead ore per fm. The lode in the rise over the back of the 10 fm. level is 5 ft. wide, containing killas, decomposed quartz, blende, and cubes of lead ore. The lode in the stopes over the back of the 10 fm. level varies from 3 to 7 ft. wide, and will yield on an average 1¼ ton of lead ore per fm. The lode in the deep adit level, east of the boundary, is 18 in. wide, composed of clay-slate, carbonate of lime, blende, and detached cubes of lead ore; the lode looks very promising in the back of the level; we appear to be driving under a fresh bunch of ore. This level is about 10 fms. behind the rise now being put up from the back of the 10, and as soon as we effect a communication we purpose putting up a rise over the back of the deep adit level, to prove this. The lode in the two stopes over the back of the deep adit level will yield on an average 1¾ ton of lead ore per fm. Taylor's drift going east has passed through a fine orey lode since the last report, but at present is disordered by a strong cross-course, and we are now driving through the same. The lode in the same level, west of the footway winze, is 2 ft. wide, and worth ½ ton of lead ore per fm. We have sixteen men employed in the various stopes over the back of Taylor's drift, in which the lode will yield on an average 15 cwts. of lead ore per fm. In Williams's level we are still driving the cross-cut south, and nothing has been met with yet of any value. We have two stopes in course of working over the back of Williams's level, producing 1 ton of lead ore per fm. The driving of Pryse's level east has been abandoned for the present, until something better is met with in the level below.

DALE.—N. Niness, April 13: The 44 cross-cut is being pushed on as fast as possible, but the heavy rain sometimes impedes our progress, but I trust we shall be able to get on better for the future. There is no alteration in the tributers' pitch.

— R. Niness, April 17: We are now getting on favourably with the 44 cross-cut. The tribute pitch is without alteration.

DEVON WHEAL LOPES.—April 17: We find the water at the 62, or bottom level at the main engine-shaft, so much as to necessitate the putting down an additional lift; this, I expect, will be finished next week, as well as the repairs to the balance-bobs. The lode in the bottom of the 35 east is 3 ft. wide, composed of blende, mundic, and copper ore.

EAST BOTTLE HILL.—J. Eddy, April 18: We set to work our new 60-ft. wheel on Tuesday last, and everything passed off well, and we are now in full work, and stamping tinstuff of good quality. The men will now resume driving in the 10 east, and also in the 24, or deep adit level west, where at both points there is a paying lode. We shall hereafter continue to drive east, and continue the adit south to cut the other lodes known to be in the sett. In about a month from this time I hope to sample the first parcel of tin.

EAST CHIVERTON.—John Nancarrow, April 16: The shaftmen are making very good progress in sinking Bartlett's shaft, which is now down from surface nearly 10 fathoms; we have set it to 12 men, at 3*l.* 15s. per fathom, 10 fathoms stent, and the men to have a premium if they finish the 10 fathoms within four weeks. We hope to complete the erection of the whim this week, and the men are also getting on nicely with the excavations for balance-bobs, &c.

EAST ST. JUST UNITED.—R. Pryor, R. P. Goldsworthy, R. Wearne, April 17: Eastern Mine: Phillips's shaftmen have been engaged removing the lifts, skip-roads, ladder-way, &c., from Cranjack shaft, which they have completed; they are now engaged cutting fork in the 30, at Phillips's shaft, which they will complete without further delay. The lode in the 20, south from Phillips's, is worth 3*l.* per fm.—Western Mine: The lode at Saveall's engine-shaft, sinking below the 76, is worth 12*l.* per fathom, and is promising for further improvement. The lode in the 76 west is worth 6*l.* per fm. The lode in the stope in back of this level is worth 7*l.* per fm. In the stope in back of the 62 west the lode is worth 4*l.* per fathom.—Buck Lode: The lode in the 62, driving east, is worth 4*l.* per fathom.—Owl Lode: In the 20, south from Saveall's, the ground is more favourable, and the lode is kindly. The lode in the 40, north from Reddipper shaft, is worth 3*l.* per fm. The 10, north from West Buck shaft, is worth 8*l.* per fm. The lode in the winze sinking below the adit, north from same shaft, is worth 7*l.* per fm. We are expecting to communicate with the 10 daily. The lode in the adit, north from same shaft, is worth 7*l.* per fm.; we have cut a vugh in the bottom of the end, rich for tin, which looks well for the deeper levels.—North Lode: The 20 east is worth 4*l.* per fm.—Reddipper Lode: The lode in the 20 east is worth 3*l.* per fathom. There is no change to notice in any other part of the mine since last reported upon.

EAST WHEAL GRENVILLE.—G. R. Odgers, Wm. Bennetts, April 17: We have holed the winze from the 85 to the 95, and the men are getting on pretty well with the sinking of the engine-shaft below the 95, and consequently there is no change to report. We have to-day sampled (computed) 142 tons of good quality copper ore.

EAST WHEAL LOVELL.—Richard Quentrall, April 17: The mine has improved since the account, and the south lode is very rich. In driving east above the 40 the lode is now worth 35*l.* per fathom. The western end is worth 80*l.* per fathom. In the bottom of the 40 the lode is worth from 50*l.* to 60*l.* per fathom. —North Lode: In the stope west of the shaft, in back of the 45, the lode is worth 20*l.* per fathom; east it is worth 25*l.* per fathom.

EAST WHEAL RUSSELL.—J. Goldsworthy, April 12: In the 140 east there is a great change for the better. So far as we can see the lode is about 2 feet below the back. Inside the breast, boring for 1 foot wide, it is rich copper ore; we hope by to-morrow to see sufficient of the lode to give its value. In the 140 cross-cut (Ede's) we have driven through a brauch; inside the branch the water has increased.

— James Richards, April 12: The lode where cut into is some 6 fms. beyond where I saw it, and, although it does not look so well at the latter point, judging from appearances, and the flow of water, I hope and believe the lode will improve again. We shall prove it as fast as possible.

— J. Goldsworthy, April 13: In the 140 east, so far as we can see, the lode is worth from 20*l.* to 25*l.* per fm.; we are of opinion, as we open down the breasting timber, the lode will much improve in value, which is looking exceedingly promising.

— J. Goldsworthy, April 15: There has not been any of the ore part of the lode taken down in the 140 east since Saturday; therefore, there is no change. We hope to be going forward in the ore part to-morrow, the result of which you will be advised.

— J. Goldsworthy, April 16: *Telegram:* The 140 east is worth 25*l.* per fm., and promising a further improvement.

— James Richards, April 17: The punch-pit has been cut down in the 140, and the skip-road made complete to the bottom, or 150, and the driving of the cross-cut north and cutting trip-plat will now be got on with as fast as possible. In Ede's cross-cut north, in the 140 east, good progress is being made, and the indications bespeak the near approach of the present end to the north lode. In the 140 east the part of the lode open to view, 4½ ft. wide, is a good course of ore, worth from 25*l.* to 30*l.* per fathom, and altogether appearances at present are good and encouraging. In the cross-cut north, in the 130 east, the ground has improved, and fair progress is being made.

— John Goldsworthy, April 18: The lode in the 140 east is worth full 30*l.* per fathom. There is no other change to notice since last reported upon.

FRANK MILLS.—J. P. Nicholls, J. Cornish, F. Cornish, April 17: The east lode in the 145 north continues large, consisting of quartz, white iron, blende, mundic, and lead ore, but not yet of much value. The west lode in the 130 north yields occasionally good stones of lead ore, and presents a good appearance for an early improvement. The ground in the cross-cut west from the east lode in this level is without change. We have not intersected any more parts of the lodes. The stopes in the back are yielding ¾ ton and ½ ton of lead ore per fathom respectively. The part of the east lode being carried in the winze in the bottom of this level will yield ½ ton per fathom. The west lode in the 115 north is unproductive of lead ore to value. The west lode in the 100 north is still disordered, and the ground rather stiffer. The stopes in the back of the 115 and 100 fm. levels are yielding ½ ton of lead ore per fathom on an average. The stope in the back of the 45 fm. level, in the north part of the mine, is yielding fully ½ ton per fathom. The tribute pitches are producing about the same quantity of ore as for some time past, and looking quite as well to continue equally productive

FURSDON.—J. Collins, April 16: We have to-day set the following bargains: —A stope in bottom of 21 west to four men, at 1*l.* 10s. per fathom, and 10s. in 1*l.* for the ore raised, at a fixed standard of 10s. per unit every produce. This will apply to all our settings. A stope in back of the 11 east to six men, at 1*l.* 17s. 6d. per fathom, and 10s. in 1*l.* for ore. A pitch in bottom of the 11 east to six men, at 8s. 6d. in 1*l.*, takers to pay for dressing the ore. An end to drive east in the 11 by two men, at 4*l.* per fathom. The men who have taken the stopes in bottom of the 21 west, and the end in the 11 east, are to rise to hole to the winze in bottom of the 11 east, at 4*l.* 10s. per fathom, which we calculate to do shortly.

GAWTON COPPER.—G. Rowe, G. Rowe, jun., April 13: The sinking of the new engine-shaft below the 60 is being continued with all possible vigour. The lode in the 60, east of cross-cut, has not been taken down during the past week. The lode in the rise in back of the 60 west is worth 4 tons of ore per fathom. The lode in the winze sinking below the 50 is worth 5 tons of ore per fathom. The lode in the 40, west from Molland's winze, is worth 1 ton of ore per fathom. The lode in the 50, west from Moor's winze, is still a fine course of ore, worth 6 tons of ore. The ground in the 50 east, on the flookan part of the lode, continues good for progress. The machinery and pitwork are in excellent condition.

GOTHIC.—James Lester, April 17: The engine-shaft sinking below the 30 continues to progress favourably; down upwards of 2 fms., and, so far, not much troubled with water. During the last week we have done but little in sinking the engine-shaft. The men have been making dam in the bottom of the 30 for the water, so as not to let it come into them during the time they are sinking. They have also put up tackle for drawing the stuff they break to the 30, previous to drawing it to surface. They will now again get on with all dispatch with the sinking. We are now ready with about 18 tons of lead ore, which I have sent to Aberystwith, and I have sent off samples to the smelters, as requested. The 30, driving north of east, is looking as though we should have a change. I expected one last Saturday. At present the lode is small and poor.

GREAT CARADON.—F. C. Harpur, April 16: I have nothing new to inform you of since my last report. The driving of the 72 fm. level cross-cut, south of engine-shaft, is being done as fast as the nature of the ground will admit of, which is just now rather hard, consisting of killas, mixed with branches of quartz, containing mundic, iron, peach, and at times stones of copper ore; and nothing shall be wanting on our part to push forward this level towards the lode with all dispatch.

GREAT LAXEY.—R. Rowe, April 16: Since Capt. Barkell's report of the 26th ult. we have no marked change in any part of the mines. The bottom or 220 fm. levels are now in regular course of driving; the lode in the north end is at present small, but in the south it is 4 ft. wide, and rich in blende, with a little mixture of lead. We have no change to report on in either the 210 or 200 fm. level ends driving north; the lode in each is about 3 ft. wide, worth in the 210 for lead and blende 25*l.* per fathom, and 30*l.* per fathom in the 200. The improvements reported in the 190 and 165 fm. levels, driving north, have not been maintained; the lode in the former is again back to its previous value of 80*l.* per fathom, and in the latter end I also value it at 80*l.* per fathom for lead and blende. The 155 fm. level end improves on, the whole, for lead, now worth 70*l.* per fm. We are urging on the 145 fm. level with all speed towards Dumbell's, and having now a good supply of air, our progress is satisfactory. For a long time the lode has been small, and scarcely traceable, but within the last month it has opened out to 3 ft. wide, with an appearance of lead and blende coming in. This level is now driven north of the Welsh shaft 120 fms., and to reach the perpendicular of the first of Dumbell's ore ground will require to go 90 fms. further; but we have fair chances of discoveries between.—South Ground: I am glad to say we have holed the sump between the 165 and 190 fm. levels earlier than expected, having met with some open ground both in the rise and sump We shall now be in a position to increase our copper raisings with ease. At Dumbell's the new engine-shaft is now 13¼ fms. below the 110; the lode continues large, but it is not at present quite so rich for lead, worth 90*l.* per fathom. The lode in the 110 fm. level end, driving north, has increased in size—now wider than the level—and in the part we are carrying is worth 60*l.* per fathom; some of the north stopes in the roof of this level have declined in value, while those to the south, as well as the stopes immediately over in the roof of the 85, continue to look exceedingly well. The 70, driving south, has a lode 5 feet wide, worth from 140*l.* to 150*l.* per fathom, and is at this moment the best end in the mine. In consequence of this, we have started the 60 fm. level, and feel confident it will result shortly in a similar discovery. There is no change of sufficient consequence to notice elsewhere in Dumbell's. At Glenroy the shaft is now sinking below the 10 fm. level, and is down 2 fms.; the lode is improving both in size and character, now 2 ft. wide, composed of a favourable-looking gossan, quartz, and soft rock, in which within the last few days some lead and blende have made their appearance. We now expect to make steady and rapid progress in the sinking and opening out of this mine.

GREAT MONA.—John Trewins, April 10: We have drained the water at Ballaglass to the 23, or bottom level, and the shaftmen are now engaged in clearing up the shaft below that place. The 23 is extended about 31 fms. south of engine-shaft; the lode for nearly all the driving is more regular, and better defined than in the 10, with small branches, or feeders, spotted with copper ore, dropping in from the east side towards the lode, which looks well for improving it in depth. The same level north is driven about 24 fms. from shaft, 7 fathoms of which have been driven on the east side of the lode on a split, a branch which contains jack and copper ore. The main part of the lode, on the west side, is about 3 ft. wide, with a horse of killas in the centre; the part of the vein on the lying-cheek, or footwall, consists of a very kindly quartz, spotted with copper ore, and is presenting a very promising appearance. We have begun to sink the winze, referred to in my last report, in bottom of the 10, south of engine-shaft; the lode here is 4 ft. wide, producing good blende, spotted with lead ore.

GREAT NORTH DOWNS.—William Rich, Cornelius Bawden, April 17: The lode in Sleggan's shaft is just as last reported—35*l.* per fathom for the length of the shaft (14 feet). The water is rising up out of the very bottom of this shaft very strongly; it appears as if there is a large porous lode coming in under the slide. The 70 fathom level end, west of Sleggan's, is looking better, worth fully 12*l.* per fathom. The No. 2 winze, 4 fathoms below the slide, is worth 25*l.* per fathom. The No. 3 winze, 40 fathoms west of the winze referred to, is improving as we sink below the influence of the slide, now worth 7*l.* per fathom. The stopes in the back of the 70, west of Sleggan's, are worth 15*l.* per fathom. The 86 fm. level end, west of King's, has an improving appearance, worth 6*l.* per fathom. King's shaft, sinking below the 86, is yielding saving work. It is our opinion that by sinking a few fathoms deeper we shall intersect the slide, and have a good improvement below it. The 60, east of Butler's, is in a congenial channel of ground. We expect an improvement as we approach the cross-course, which is some 10 or 15 fathoms further west.

GREAT RETALLACK.—G. R. Odgers, April 15: I have just returned from this mine, and am glad to tell you that a great improvement has taken place in No. 2 shaft, sinking below the adit. In the south end of the shaft there is a very good bunch of lead, worth, I should estimate it, at least 2 tons to the fathom, but the bottom of the shaft is not quite so good, worth 14 cwts. to the fathom. I do not remember ever seeing a prettier lode than there is in the south end of the shaft, and which appears to be dipping north under the gossan; the lode is embedded in a beautiful lead killas, hence I think the opening of the 10 will be through productive lead ground. The shaft is now down, but the men have a little ground to square out, and some timber to put in, which will take them probably until Wednesday morning, when they will commence to drive both north and south. Next week I hope to set another 10-fm. lift, for about 6*l.* per fathom.

— *Telegram:* April 17: No. 2 shaft is looking well, and a good bunch of lead in the south end for 2 fms. high, worth 2 tons of lead per fm. The bottom of the shaft is improved, worth nearly 1½ ton per fm.—a good discovery.

GREAT SOUTH CHIVERTON.—J. Nancarrow, John George, April 15: The ground at Gifford's engine-shaft continues moderate for sinking, and the lode looks well for the production of lead. We have been hindered by breakages of the rods in the past week, but are now in good course of sinking. In the 30 fm. level cross-cut north the water continue to increase as we get nearer the lode, which we hope to reach within a fortnight, as the ground is better for driving, and we are pushing on the end as fast as possible. There is no alteration to report in the 20 east. We have now commenced driving the 30 west on the south part of the lode.

GREAT WHEAL BADDERN.—R. Pryor, H. Tregoning, April 13: Hill Brothers Engine-shaft: The ground in the cross-cut south, to intersect the Badderton lode in the 75 fm. level, appears to contain a portion of iron with the mundic in the many veins traversing the end, and the water flowing therefrom is of a redish colour, proving that we are getting through the elvan course; every effort is being made at this point to reach the tin lode, which we hope will soon be accomplished. The ground in the 75 end, on the lead lode, is favourable for driving, being a beautiful productive elvan in appearance, and as we get into the western hill, towards the old mine, it becomes softer and more congenial for silver-lead. The lode in the end is at present split into several branches, containing occasional spots of silver-lead, mundic, flookan, and soft spar. The water flowing from these ends has increased the speed of the engine; also, in consequence of the very wet season we have had more water to contend with, and several of our neighbouring mines have been almost inundated. The engine and machinery are working well, and all operations in and throughout the mine are going on with all possible speed.

GWYDYR PARK.—Wm. Smyth, April 16: The lode in Gwyn Llifon north end is about 15 in. wide, composed of spar, mundic, blende, and spots of lead ore, still letting out water. In the western end the lode is still small and disordered, which I consider its occasioned by small branches crossing the end; it is still wet, and the ground rather slow for progress.

HARWOOD.—Joseph Race, April 12: We have taken down the stope No. 1, in the north string, up to the cross vein, and there are some spots of ore in the cross vein. I believe this vein will bear ore, so I think of turning the level to the north in it, and driving by the east cheek, that we may see when anything goes off in that direction. We have two men driving a cross-cut from the end of the level to cut the south branch of north string; we expect it to be better at this point than it is in the back ground. No alteration in the stopes worth noting since last week. We have two men regularly at work now opening the old level to Trough. We will weigh off 24 tons of ore on Thursday, April 18.

HERODSFOOT.—T. Trevillion, April 18: We have not yet reached the lode in our 160 fm. level, but are daily expecting to intersect it, the cross-cut being driven the calculated distance, agreeable with the level above. The lode in the 147 fm. level north is 1 ft. wide, yielding stones of lead. The lode in the 147 fm. level south is 2 ft. wide, and worth for lead 10 cwts. per fm. There are five stopes working in the back of the 147 fm. level, yielding on the average 8 cwts. of lead per fm. The lode in the 137 fm. level south is worth 8 cwts. of lead per fm.; there are three stopes working in the back of this level, yielding on the average 12 cwts. of lead per fm. There is no alteration in the other stopes since last report. The mine throughout is in a very satisfactory state of working. We sold (computed) 62 tons of ore on Saturday last, to Messrs. Sheldon, Bull, and Co., for 27*l.* 13s. 6d. per ton.

LADY BERTHA.—J. Metherell, S. Harpur, April 17: Our 30 and 41 fathom levels are much the same as for some time past. The leaders of ore are about 6 in. wide, and worth 14*l.* per fm. Our machinery is in good working order. We shall sample, if all be well, on the 26th inst.

MINERA UNION.—W. T. Harris, April 18: Douglas's Shaft: The lode in the 40 yard level south is 3 ft. wide, composed of chert, and poor for lead; the lode in the north end is 3½ ft. wide, composed of chert, carbonate of lime, and a little lead.—Brabner's Shaft: The ground in the 60 yard level cross-cut, under Douglas's shaft, is favourable for progress. No alteration in the cross-cut in the 80 yard level to the red vein. The ground in the big cross-cut consists of limestone, hard for progress.—Williams's Shaft: The caunter lode north of shaft, in the 40 yard level, is 2 ft. wide, worth 15 cwts. of lead per fm. The stope in the back of this level is worth 1 ton of lead per fm., and very promising.

MOUNT PLEASANT.—W. Wasley, J. Edwards, April 18: In driving the cross-cut south, from the bottom of Jenkins's shaft, we have cut two east and west joints; the last we cut is 6 yards from the shaft, which looks very kindly, and has produced some very nice lumps of ore. We shall not, however, drive on the course of this joint now, but keep on the cross-cut for about 15 yards further, at which point we expect to cut another joint; set to four men, to drive for the month, at 30s. per yard, the men to pay for filling, landing, drawing, &c. In the level driving north from Bright's shaft the ground has been very kindly all the month, and has produced about 2 cwts. of ore per yard on an average, and we think the end will soon improve; set to four men, to drive for this month, at 20s. per yard, and 60s. per ton for ore. We have six men working on tribute, in three pares, at 8*l.* per ton, who are making fair wages, and have one man and three boys dressing ore from the old burrows at surface, at 7*l.* per ton.

NETHER HEARTH.—W. Vipond, April 13: We have began with the dressing, which is progressing satisfactorily, considering the number of hands we have. The stope west is also looking full as well this week as I have yet seen it. There is now apparently nothing to stop us from getting on both inside and out. The stope is set to four men, at 98s. per fathom.

NEW CROW HILL.—Capt. Trelease, April 16: The 70 east is set to drive in the side of the lode to six men, at 8*l.* per fathom. The 35 east is communicated to No. 1 stope. The back of the 35 to stope by three men and three boys, at 10*l.* per fathom, and 2*l.* per ton for the lead ore. Old No. 1 stope is re-set to eight men, at 20s. per fathom, and 4*l.* per ton for the lead ore. A stope east of the last set to six men, at 20s. per fathom, and 4*l.* per ton for the lead ore. Loxton shaft has only 15 in. more to sink to the depth of the 70 in the old mine; consequently, I have set them a bargain to sink this, case and divide down the shaft, cut plat, &c., and bring down the whim-kibble preparatory to our driving in cross-cut to the lode.

NEW PEMBROKE.—F. Puckey, J. Puckey, April 15: Good progress is being made in sinking the engine-shaft below the 60. We have only 9 ft. more to sink to reach the 75, which will be our next level; we hope to accomplish this evening in a fortnight from this time; the ground in the shaft is still favourable for progress. The three stopes in the back of the 60, west of the shaft, are without alteration—still looking very promising, and producing good average work for tin, and worth respectively 8*l.*, 9*l.*, and 8*l.* per fm.; the average price for stoping is 32s. 6d. per fm. In the 45 cross-cut north, west of the great cross-course, we have intersected the lode, and commenced driving west on its course; the lode so far as seen is near 2 ft. wide, and of great promise, composed of quartz, peach, and tin, and worth for the latter 5*l.* per fm., and looking very favourable for improvement after passing the influence of the cross-course; the cost for driving this end is 70s. per fm. We have apparently a fine piece of mineral ground on this and other lodes to be explored in that direction, being parallel with and near to the rich bunches of ore which made in the Old Pembroke, west of same cross-course. We shall now urge on the driving of the 60 to cut the same lode, also west of the cross-course, with all possible speed. The 30 cross-cut, driving north of engine-shaft, is without alteration: cost for driving 80s. per fm.

NEW WHEAL TOWAN.—R. Pryor, April 17: Saturday last was our pay-day setting, we set again the adit level to drive west on Towan lode by four men, at 6*l.* per fm.; no lode has been taken down since last reported on.

NORTH DOWNS.—Francis Pryor, John Grenfell, April 17: Bennetts' Shaft: The 70, east of this shaft, has penetrated the elvan in the back of the end about 6 ft., the character of which is very good for mineral, and the lode, although unproductive, presents a better appearance than it did in the killas.—King's Engine-shaft: We have this day taken down the lode in the 50, west of this shaft, which is much the same as last reported, producing 1 ton of ore per fm. with a promising appearance. There is no change to notice in any other part of the mine. We sampled yesterday 34 tons, computed, of usual quality ore.

NORTH JANE.—James Rowe, April 16: The 36 fm. level cross-cut, south of Leed's engine-shaft, is driven south 3 fathoms, and in hard elvan; this circumstrengthens my opinion that there is another lode south. In tracing the working of Wheal Jane great tin lode for upwards of a mile and a half I have never seen any elvan south of the lode; we have six men driving this cross-cut, at 12*l.* per fathom. We have six men driving east of the engine-shaft; the lode is 18 in. wide, containing a little tin. I advise a cross-cut being driven from the western shaft at the old mine north, by which I think there would be strong chances of making a discovery.

NORTH LEVANT.—James Bennetts, James Thomas, April 17: The lode in the 115, east of Law's shaft, is worth 2*l.* per fathom, driving for 2*l.* per fathom. The 100 is driving east at 2*l.* 15s. per fathom; the lode is worth 2*l.* per fathom. The 100 is driving west, at 2*l.* 5s. per fm.; the lode is worth 1*l.* 10s. per fm. The stopes in the back of the same, working at 20s. per fathom, are worth 1*l.* 7s. per fathom. The 85 is driving east, at 1*l.* 7s. 6d. per fathom; the lode is producing a little tin. The 70 is driving east, at 1*l.* 5s. per fm.; the lode is worth 1*l.* 10s. per fathom. The stopes in the back of the same, working at 12s. 6d. per fathom, are worth 2*l.* per fathom. The 60 fathom level end is driving east, at 1*l.* 15s. per fathom; the lode about pays for driving. We have 14 pitches working, at tribute, varying from 13s. 4d. to 19s. in 1*l.*

NORTH POOL.—J. Vivian and Son, F. Clymo: The sump-winze sinking under the 24, on the middle lode, is down 12 fathoms 4 feet, and producing 2½ tons of good yellow copper ore per fathom in depth, its length being 10 feet, worth 1*l.* We have about 8 feet more to sink to reach the same depth as the 40 fathom level on Ballarat lode, which we calculate on accomplishing in another month. We shall then commence driving east and west, and from present appearances shall then be laying open a profitable section of ore ground for stoping, and commence making regular sales of ore. In the winze which we are sinking under the 24, on the middle lode, west of the sump, we are now down about 10 fathoms, where the lode is producing copper ore worth 15*l.* per fathom. We have recently passed through a slide in this winze, which appeared to cut out the ore when we first met with it, but on sinking through it the lode has become more valuable than it was before, and has every appearance of improving still further.

OLD GUNNISLAKE.—H. Rickard, April 17: On Saturday the following bargains were set:—The 48 fm. level to drive east from Parker's shaft, by six men, at 3*l.* 10s. per fathom, stented the month. The 48 west, by six men, stented 2 fms., at 7*l.* 10s. per fathom. The ground in the eastern end is easy for driving, and good progress is being made by the side of the lode, and letting out water freely. There is no alteration in the character of the lode in either end since last week's report.

PEDN-AN-DREA UNITED.—W. Tregay, J. Thomas, April 13: Sump Shaft: The ground in the 140 cross-cut is very hard for driving, and the progress slow. In the 130 east the lode is worth 4*l.* per fathom. In the 130 west the lode is worth 12*l.* per fathom; two stopes behind this level are worth 20*l.* and 25*l.* per fathom respectively. In the 120 west the rise is unproductive. The 100 end east is worth 10*l.* per fathom.—Cobbler's: There has been nothing done in the bottom of this shaft in consequence of the water, which will be let off by the rise now coming up from the back of the 120 west; the men here have been stoping in the bottom of the level westward, where the lode is worth 18*l.* per fathom. The 110 east end is not yet through the cross-course. The 110 west end is worth 15*l.* per fathom, and no south wall. In the 90 north cross-cut nothing of importance has been intersected since last report. The 90 west, on the north lode, is producing about 5*l.* worth of tin per fathom.—Cobalt Lode: This lode is unproductive, but as the rise is on the copper lode as well as the cobalt lode, the copper lode producing good stones of copper ore, and promising for improvement, the rise is still continued. The tribute pitches are looking favourable for enabling us to keep up our small supplies of tinstuff and tin sales. There is no other change to report.

PRINCE OF WALES.—J. Gifford, W. Gifford, April 13: In the 55 east the lode is improving, both in size and quality, and we have every reason to expect a good course of ore will be met with here shortly, as the winze in the 45 east (which is 3 fms. ahead) is also improving, and drained dry by this end. There is no other alteration in any part of the mine to notice since our last report. The mine is still looking well.

— April 16: The 55 east is still improving, now worth 25*l.* per fm. Every other point in the mine is worth full the value as when last reported.

— J. Gifford, April 18, 3 P.M.: *Telegram:* 45 west, value 60*l.* per fm.; winze under the 45, value 30*l.* per fm.; 55 east, value 25*l.* per fm.; 55 west, 70*l.* per fm. Mine never looked better.

PROVIDENCE.—W. Hollow, P. Rogers, J. White, April 16: There is no change in the mine of importance since the last quarterly report. We have an improvement in the 95, which is now worth 20*l.* per fathom; but some other places are

not quite so good. We continue to raise about our usual quantity of tin, (say) from 90 to 100 tons a quarter.

ROSECLIFFE AND TOLCARNE.—R. Pryor, J. Phillips, April 17: We set the following bargains on Friday last:—Lindo's engine-shaft to sink below the 40, by nine men, at 19*l.* 10s. per fm.; and if 2 fms. are sunk within the month the takers are to be paid 21*l.* 10s. per fm. No time will be lost in reaching the 50, in order to put out a cross-cut in this level to intersect No. 4 lode. The 30 to drive west of cross-cut, on No. 4 lode, by three men, at 1*l.* 5s. per fm.; the lode here still disordered by the great flookan. To stope the back of this level, east of cross-cut, by two men, at 20s. per fm., in a lode 2 ft. wide, worth 7*l.* per fm. for lead. We are glad to say that we have effected the communication to the old mine, which has given good ventilation to the whole of the mine.

ROSEWARNE CONSOLS.—John Nancarrow, Richard Knuckey, April 13: At our usual survey to-day the following work was set:—The 100 to drive east of Ellen's, by eight men, at 9*l.* per fathom; the lode is 1 foot wide, and letting out a great deal of water. The back of the 80 east to stope by four men, at 2*l.* per fathom; the lode is worth 5*l.* per fathom. A rise above the 80, by four men, at 2*l.* per fathom; the lode will nearly pay for rising. The 80 to drive west of sump, by six men, at 2*l.* 5s. per fathom; the lode is 1 foot wide, yielding stones of ore. The 70 to drive west of sump, by four men, at 1*l.* 17s. 6d. per fathom; the lode looks promising. We have also set four pitches to eight men, at an average of 13s. 4d. in 1*l.* The water is now eight strokes per minute.

SNAEFELL.—W. Kitto, April 8: Since the general meeting, held on the 14th ult., we have resumed the sinking of our engine-shaft; for some time, owing to the fearful state of the weather, our progress was very slow, but I am happy to say at present everything goes on without interruption; the lode in the bottom still shows a little ore. At the 40 cross-cut we continue to intersect strings, containing spots of ore, but still of no importance. I see no improvement in the cross-cut at the 25, and I consider another month will give it a fair trial. In the south adit level we appear to be getting into harder ground, which I have been wishing to see for some time. The north adit level continues in soft ground, and is poor; we push this with the utmost force to get up with the east and west lode. We have still some pretty good ore (chiefly blende) in the 20 fathom level end, driving towards the engine-shaft, and the lode looking very promising indeed. The machinery, &c., is in good working order.

SOUTH CONDURROW.—J. Vivian and Son, W. Williams, April 13: In King's shaft, now 5 fms. below the 61, the lode continues of a favourable appearance. In the 61, east of King's shaft, the lode is of much the same character as when last reported on. In the 61, west of King's shaft, the lode is without material alteration In the 51, west of King's shaft, the lode has not been taken down, but we shall commence doing so on Monday next. In the stope east from the winze sunk from the 40 to the 51 fm. level, west of King's shaft, the lode is producing copper ore, worth 15*l.* per fathom. Westward from the winze the lode is worth 20*l.* per fathom. In the 30, west of Vivian's shaft, the lode is 2 ft. wide, and orey throughout, presenting a very promising appearance. Old Tye shaft is now 10 fms. below the 20, the lode being sparrey, and of a favourable character for metals. We shall sample on Wednesday next 50 tons of ore of good quality.

SOUTH DARREN.—J. Boundy, April 16: The lode in the 60 west has undergone a very favourable change, and continues its size, and will produce more ore than when last reported; here we have about 6 fms. more to drive to reach the perpendicular, where the main pipe of ore was met with in the 50. In the 50 west the ground is everything that can be desired for lead, and from the quantity of water issuing from the end I have every reason to believe there is a good lode in advance of this (the 50), which we are pushing on as fast as possible. In the 40 west the lode at present is small and poor for minerals. In the 30 west the lode is 18 in. wide, composed of sugary spar, carbonate of lime, with nice strings of lead and copper ore of a very favourable character. There is no important alteration in any other part of the mine.

SOUTH GRENVILLE.—G. R. Odgers, Wm. Bennetts, April 13: The lode in the engine-shaft sinking below the 20, is from 20 in. to 2 ft. wide, of quartz, &c. The lode in the 20, east from engine-shaft, is 2½ ft. wide, of quartz, gossan, &c., with stones of grey ore—a most promising lode.

SOUTH TREVENNA.—T. Jennings, April 17: We are driving on the caunter lode, and find it now 4 feet wide, producing good tin work for the stamps; we are keeping 16 heads of stamps at work from this lode, and it is turning out satisfactorily. No. 2 lode also turns out splendid work in the stamps. We consider we have about completed our uphill work, and with a better price for tin we shall have a dividend mine. Our stamps and machinery are working well.

TREVENEN AND TREMENHEERE.—J. Medlyn, C. George, April 16: The lode in Trevenen shaft is 2½ feet wide, composed of peach, prian, and tin, worth 4*l.* per fathom. The bottom end is improved, and now worth 14*l.* per fathom. The stope in the back of this level is worth 7*l.* per fathom. The ground is still fair in the 172, and good speed is being made in driving it. We are taking down the lode east and west of Johns's winze in the 162, where the lode is large and well defined, and worth 20*l.* per fathom at each point. The 150 end does not improve as we expected it would. No. 1 stope in this level is worth 8*l.* per fathom. No. 2 is worth 9*l.* per fathom, and No. 3 is worth 4*l.* per fathom. We have cut through the lode in the 135, and find it to be well defined, and worth 12*l.* per fathom. The stopes in the 125 are worth 10*l.* per fathom. The discovery in the 162, east of the east shaft, affords great encouragement for pushing on the deeper levels. The 172 is within one month's driving of the above point, and the bottom level is within two months' driving of it, and the end is worth 14*l.* per fathom at present.

TREWEATHA.—Thos. Foote, J. Scoble, April 17: The rise in the back of the 40 fm. level south is without change, still producing saving work. The lode in the 30 fm. level north is 3 feet wide, worth 5 cwts. of lead per fathom. The two stopes in the back of this revel are still producing 3 and 4 cwts. of lead per fm. —South Mine: The lode in the 73 fm. level south is 12 inches wide, producing 6 cwts. of lead per fathom, and the ground is easy for progress. The tribute pitches are without change, the men getting fair wages. Harris's shaft is down about 2 fms.; the lode is about 3 feet wide, composed of prian and spar. We are still forking the water at the north mine slowly, and hope to be able to work at the 50 in the coming week.

VIGRA AND CLOGAU.—A. Dean, April 16: Improvements in the No. 2 mine in the surface stope, the No. 1 stope west, the No. 2 stope in back of adit east, and in the No. 4 sink under adit, have added 144 ozs. of gold to the 108 ozs. advised as ready last week, and 252 ozs. 7 dwts. 4 grs. of gold have been forwarded to-day. With the previous remittance, the total of gold produced and sent to London during the last fifteen days has been 345 ozs. 13 dwts. 4 grs. The mine is steadily improving. In the adit end east the lode is much improved in quality, and is 8 feet wide. The adit end west is in the slide, and disordered. The No. 5 sink will be commenced immediately, at about 50 fms. west from the outcrop of the gold floor, but is not expected to reach it until 4 fms. deep. At the No. 1 mine the surface explorations promise well. In the shallow adit end east the lode is large, but poor at present. Other surface explorations upon the lode have been hindered by the heavy rains. The reduction works are in good order, with a full supply of water.

WESTMINSTER.—F. Evans, April 17: The lode in the new eastern shaft is worth 1 ton per fm. for lead ore; the lode is large, and most promising in every respect, and I have no doubt we shall open up a good mine in this portion of the property. The engineers are getting on well with the erection of the engine.

WEST BASSET.—G. Lightly, April 17: Grenville's Shaft: In the 154 fathom level east the lode is 4 feet wide, producing good stones of ore. In the rise in back of the 154 west the lode is 4 ft. wide, producing 1 ton of ore per fathom. In the 144 east the lode is 3½ ft. wide, producing 1 ton of ore per fm. In the winze sinking under the 144 west the lode is 2½ ft. wide, producing 2½ tons of ore per fathom. In the 134 west the lode is unproductive.—Thomas's Shaft: Caunter Lode: In the 84 west the lode is 1½ ft. wide, unproductive. In the 75 west the lode is 2 ft. wide, containing a little tin, but not enough to value. In the 75 fm. level east the lode is 1 ft. wide, with stones of ore.—Middle Lode: In the 75 east the lode is 1 ft. wide, containing stones of ore. In the winze under the 65 the lode is 1 ft. wide, producing 1 ton of ore per fm. In the 52 west the lode is small and poor. In the winze under the 52 fm. level the lode is producing good work for tin.

WHEAL GRENVILLE.—G. R. Odgers, Wm. Bennetts, April 13: The lode in the 110, east of the engine-shaft, on the old lode, is from 20 in. to 2 ft. wide, with stones of ore on the north side—a kindly lode. The men are getting down pretty well with the new shaft, sinking below the 120; they have not taken down the lode, because we are afraid it will let out too much water. The lode in the 120 west is 3 ft. wide, producing good stones of tin, with a little copper—a most promising lode; there are two stopes above this level, worth 3*l.* 10s. and 6*l.* per fathom The lode in the 100 east is 2 ft. wide, and producing stamping work; there are two stopes above this level worth 5*l.* and 6*l.* per fathom. There is no change in the ground in the 90 fm. level cross-cut since our last. We have holed the winze upon the rise between the 66 and 80 fm. levels, which we expect have laid open some tin ground for stoping.

— G. R. Odgers, W. Bennetts, April 17: We have to-day sampled (computed) 14 tons of copper ore.

WHEAL KITTY (Lelant).—Wm. Rosewarne, April 18: North Russoe Lode: The lode in the 150, east of the winze, is worth 5*l.* per fathom. The lode in the 140, east of Bolitho's rise, is yielding a little tin. The Carbona in the 120, west of Bolitho's rise, is worth 20*l.* per fathom.—Gowan Lode: The lode in the 90, east of Rogers's shaft, is disordered by a horse of granite. The lode in the rise in the back of the 90, on the south part of the lode, east of Rogers's shaft, is worth 4*l.* per fathom.—North Gowan Lode: The lode in the 50, west of the rise, west of Rogers's shaft, is unproductive. The Carbona in the 60, west of Rogers's shaft, is worth 20*l.* per fathom.—South Russoe Lode: The lode in the boundary shaft, sinking below the 20, is worth for the length of the shaft (8 feet) 8*l.* per fathom. The lode in the 20, east of shaft, is worth 4*l.* per fathom. The lode in the stope in back of the 20, east of shaft, is worth 4*l.* per fathom. The pitches are looking pretty well.

WHEAL KITTY (St Agnes).—Wm. Polkinghorne, S. Davey, April 13: In the 82, west of Holgate's shaft, the lode is not yet cut on the other side of the cross-course.—Pryor's Lode: In the new shaft, sinking below the 65, the lode is producing good stones of tin. There has nothing occurred worthy of remark during the week in the 65, west of shaft. In the 54, driving west of shaft, the lode is large, and worth for tin 7*l.* per fathom. The lode in the rise in back of this level is 4 ft. wide, and worth for tin 13*l.* per fathom. In the 44, driving east of shaft, the lode is 18 in. wide, and worth for tin 4*l.* per fathom.—Wheal Vottle Lode: In the 44, driving west of cross-cut, the lode is small, and not to value. In the 24, driving east of cross-cut, the lode is worth for tin 4*l.* per fathom. In this level, driving west of ditto, the lode is unproductive.

WHEAL SPARNON.—Wm. Tregay, E. Chegwin, April 18: Jardine's Shaft: The lode in the pitch in the back of the 60 is large and promising, producing about 12*l.* worth of tin per fathom.—Old Sump: In the 45, east of cross-course, the north lode will produce ½ ton of good copper ore per fathom, and promises improvement. In the 45, west of cross-course, the north lode produces good stones of copper and tin.—Belfry Shaft: In the 60 west end the lode will produce 6*l.* worth of tin per fathom. In the 45 east, on south lode, the lode produces good stones of tin, and promises improvement.

WHEAL TRELAWNY.—Wm. Johns, T. Grenfell, J. Pryor, April 16: We are hastening on the driving of the 210 cross-cut, east of Trelawny's shaft; the character of the ground is such as to induce us to believe the cutting of the lode will be very important, and we hope to accomplish this object as named in our former report—that is, by our next setting-day. In the 196, north of this shaft, we cannot report any change; the lode is worth 20*l.* per fathom. In the 210, north and south of Smith's shaft, the lode in each of the ends is 3 feet wide, spotted with ore. In the 196, north of this shaft, water is more freely oozing from the end, which is a favourable omen, and the lode is worth over 6*l.* per fm. Seeing that the water is on the increase, we are looking forward for an early improvement. In the 196 south the end is still in disordered ground. The ground is cased in Chippindale's shaft, consequently the sinking of the same will be more rapid than heretofore. We hope to sample of Nos. 1 and 2 parcels 113 tons of silver-lead ore.

WHEAL TREVENNA.—T. Jennings, April 17: The cross-cut at the engine-shaft is in 10 fms. 3 ft.; the ground is much harder than it was last week. We are now in the large elvan course, that runs parallel with the lode; and as we have a good deal of water coming out of the end, we are expecting daily to cut the lode, and find it a rich one.

WHEAL UNY.—S. Coade, M. Rogers, April 13: The 130, east of engine-shaft, is worth 12*l.* per fathom. The 130, west of engine-shaft, is worth 12*l.* is worth 12*l.* per fathom. The 120, west of engine-shaft, is worth 12*l.* per fathom. The 110, west of engine-shaft, is worth 8*l.* per fathom. The 100, west of engine-shaft, is worth 7*l.* per fathom. The 90, west of engine-shaft, is worth 8*l.* per fathom. The 130, east of incline shaft, is worth 5*l.* per fathom. The 130, west of incline shaft, is worth 10*l.* per fm. The 120, west of incline shaft, is worth 6*l.* per fm.

FOREIGN MINES.

CHONTALES.—W. C. Paul, March 2: Consuelo Mine: In the past month the ground has been secured in No. 2 level 2 fms., to the end of the ground where last worked by the former proprietors, and 9 ft. has been driven in whole ground. The lode here looks very fine, and is 5 feet wide—producing, on an average, 5 ozs. of gold per ton of ore for the entire width. This is just under the place where we had rich ore at surface, being a continuation of the same rich nail. We have only one Englishman and two natives engaged at this work at present, as we are employing all the force we can in getting timber from the forest. No. 3 level has been driven east 2 fms. 3 ft. 9 in. on the course of the lode, which is 4 ft. wide, and hard as last reported, producing a small amount of gold, but not to value. In Estrella nothing has been done since last report. The making and erection of the new machinery has been getting on slowly, from the want of sawyers. Now we have been able to put three sets of sawyers at the work, and hope for the future to make good progress. The water-course is being made by native labourers, at 50 c. per vara; 4 ft. wide at bottom, and 4 ft. deep.—San Antonio Mine: Two Englishmen and six native miners have been employed in securing the different levels, which are now in good repair. A shaft has been commenced from surface, to communicate with the deep adit level cross-cut, and will be pushed on as fast as possible. This will occupy about six months to finish, and will thoroughly ventilate the mine, and put it in good working order.—Santo Domingo Mine: Nothing has been done in the underground part of this mine since last report. Englishmen and natives have been employed about sundry surface work which was necessary to be done—viz., water-course from Trinidad Mine repaired, in order, with the water from San Antonio, to supply sufficient water to keep the sawing-machine at work; there is now plenty. The tramway from San Antonio cross-cut and Santo Domingo Mines has been carried on with a good force of men, and the making of a tail-race from the new machinery has occupied a large force. These places have been pushed forward, in order to have them ready by the time the new machinery is ready to go to work. The new machinery will occupy another month, at least, to complete. The showery weather has thrown the contractor back very much, but I am glad to say it is being done in first-rate order, and will, I think, give great satisfaction when finished. It now looks well, and is spoken of in praise by all who see it. I sent plans and sections of same by last mail. At the cabezales of the Javali Mine we have put two pares of natives to sink shafts, in order to keep good our titles to the same, not being regularly at work in them. We have also commenced, with seven men, to clear the trees, &c., on the site of machinery at the Pavon plantel, and shall increase the force there as soon as possible. We have now twelve men engaged on the old line of road from Pital, repairing bridges, and cutting new roads where there is necessity to avoid bad mud-holes and bad places. The mud is so deep, from the constant travelling of so many mules and oxen to this and other mines, that it would not be possible to bring carts over it for a long time after the dry season has set in; therefore, we are widening the old road, and otherwise improving it. I hope in the course of the present month to be bringing in the remainder of the steam land machine, and the other machinery—crusher and arrastres—to the Pavon. Our surface work, house building, &c., has been going on satisfactorily. The commissioner's house is nearly finished, and will be ready for occupation in a few days.

RHENISH CONSOLS.—Geo. Sweet, April 15: Bliebach: The drivage west at adit level, or north lode, is worth fully 15 cwts. of lead ore per lachter. The lode in the 10 lachter drivage is 18 inches wide, well defined, and composed of copper, blende, and lead, worth 12 cwts. per lachter. By the present appearance of this end we hope it will shortly improve. There is no alteration in the drivage east on the south lode, neither have we found the lode as yet in the cross-cut driving south, but as the end is now free from the copper lode we hope to meet with the lead lode very shortly. There is no alteration in the stope. We are rising from the 10 lachter level towards the old Bliebach shaft, and as soon as we break through we shall sink this shaft below the 10 lachter level.—Christiania: Pittar's sink is still worth 4 tons of lead ore per lachter, but as there is a great increase of water, we think it best to suspend sinking one of the winzes, and break through from the shaft to let down the water; when this is done the ores in the sink can be taken away much cheaper than by the present working. In three weeks we hope to open communication from the shaft to Pittar's sink. The drivage west in the 17 lachter level is still hard, and yielding little ore. There is no alteration in the stopes at the 10, west of Pittar's sink. The drivage west at this lode is yielding a little ore, but not to value. Sweet's sink is worth 2 tons of lead ore per lachter. We are now laying a tramway further west than Sweet's sink at the adit level, and as soon as the ores and deads are removed we intend to set a new stope in the back, and drive the adit forebreast further in the hill. The ores and attle will be removed as soon as possible. Everything is now in good working trim.

CENTRAL AMERICAN.—Feb. 28: San Carlos Mine: Carrera's lode, which was reported on the 15th to have been intersected by Cerna's deep adit cross-cut, has been driven on west from the cross-cut 3 fms.; the lode is at present without ore, bnt improved in appearance since first cut into; it is 18 inches wide, composed of hard quartz and porphyry, with a little soft porphyry and iron, and with a very regular bearing. In the deep adit level, driving east of the Gully, on the north lode, a lode, said by Capt. Butler to be Duarte's, has been intersected; it is 2½ ft. wide, with much flookan, underlies north very fast, and has thrown the north lode upwards, as well as somewhat to the south. The driving of La Esperanza adit level, south-east on slide lode, is suspended. A new winze below La Esperanza adit level, to be known as May's winze, has been commenced, and after sinking 9 ft. was obliged to be suspended, in consequence of the great influx of water; a few small stones of ore have been taken out of the lode in this sink, but not enough to value. Another winze, further west, has been commenced below La Esperanza level; this will be proving the lode, and at the same time find its right declination, by which a better idea will be formed about its going down to the north deep adit level. The stopes on the lode above La Esperanza adit level, east and west, are almost exhausted. In March it will be necessary to try below La Esperanza level, at some other points. In San Juan Mine nothing has been done since the last report, when all operations were discontinued. The cross-cut in San Pantaleon Mine, driving south-east in search of the lode, is suspended, the ground being in a very unsettled state. The raisings for March (five weeks) are estimated at 16 tons. At the hacienda de San Jose, the machinery and works generally are in good working condition, and it was expected that a small conducta would be ready for remittance to Guatemala early in May.

GONNESA.—R. W. Williams, April 7: San Giovanni Mine: Taylor's cross-cut has just now entered the south part of the main lode. The driving of the two ends on the north part of the lode will be immediately resumed, as we have now erected a ventilator at the entrance of the level, and a conduit of pipes to the ends. Caroline's engine-shaft has been set to nine men to sink under Taylor's level, at 250 frs. per metre. Taylor's level, west from Caroline's shaft, was lengthened during the past month 5 metres, the lode averaging 1¼ ton per fathom. The present end will yield 2 tons of ore per fathom. The same level, east from the shaft, was extended 10 metres during the month, almost entirely in unproductive ground. Having reached the level of Taylor's by a winze (Balsarin's), west of Victor Emanuel cross-cut, we have set to drive east and west from the same to open out that level as soon as possible. The lode in each of these ends is unusually fine, and yields fully 10 tons of ore per fathom; this winze is about 60 metres west of the end driving from Caroline's engine-shaft. Victor Emanuel has been lengthened westward during the month 3 metres; the lode in this end is about 3 feet wide, and composed of schist, carbonate of lime, and lead ore, producing of the latter 1 ton per fathom, and promising to improve. The eastern end of Victor Emanuel level was extended 8¼ metres through good ground, the average yield of which we estimate at 3 tons of ore per fathom, the present end being equally productive. The stopes over and under Victor Emanuel level are in a very good state of working, and looking well, the average yield during the past month having produced rather over 3½ tons per fathom. The San Angelo cross-cut was lengthened during the month 7½ metres; but it has not yet reached the No. 2 lode.—New San Giovanni Mine: The No. 1 lode, in the end of the level driving west from Nicolay's cross-cut, yields ½ ton per fathom, the lode in the end being 4 feet wide, and composed principally of gossan, with lumps of galena, promising to become more productive. The No. 2 lode, in the end of the level driving west from Nicolay's cross-cut, is 2½ feet wide, and yields 3 tons of ore per fm.; the same lode, in the level driving eastwards, yields 1½ ton of ore per fathom. The No. 4 lode, in the end of the level driving west on its course, although large and promising, is at present unproductive. The No. 1 winze, on the No. 2 lode, is for the present suspended, and the men set to stope east and west from the same; the average yield of these stopes is 3 tons of ore per fathom. We are driving a cross-cut south from Nicolay's day-level, in order to cut into a lode, the surface appearances of which give us to expect it will prove productive in depth.—Monte Cane Mine: The tribute pitches have been re-set, and are being regularly worked by the usual number of miners, at a further reduced tribute.—Acqua Resl Mine: No change has occurred in the appearance or size of the No. 1 lode in Emily's level; 3·50 metres have been driven on its course. The Emily's cross-cut has been lengthened during the month 6 metres without intersecting any lode or branch.—Gonnesa Dressing-floors: The completion of the additions to this establishment has been somewhat retarded by the heavy rain which has fallen so frequently during the last fortnight. This week we shall put four new buddles to work, and if favoured with fine weather we shall get all the new apparatus in place by the end of the month. In conclusion, I would observe that I never saw the company's property looking so well as now. Our returns for last month were 750 tons, and we calculate to be able to return the same amount per month for the remainder of the campaign.

AUSTRALIAN MINES.

AUSTRALIAN MINING COMPANY.—From Mr. S. Davenport, the company's agent (Adelaide, Feb. 26).—On the 23d instant the licence to search for minerals (gold excepted), with right within 12 months to a lease for 20 years (total 21 years), was duly executed by Mr. Pascoe and myself, on behalf of the Australian Mining Company: this refers to the old Tungkillo Mining Works. The area granted is short of the localities where the auriferous quartz was raised; but in case of working that I retain the right to do so within the area thus left. Mr. Pascoe's party report themselves well satisfied with the appearance of the mine, and have 50 hands at work. About 100 tons of dressed copper ore is being sampled this day, with a view of smelting, and the smelting will commence tomorrow. The cost of smelting 5*l.* per ton. The other mining party (Mr. Hill's) are at work at their shaft, which, when completed to 16 fathoms, will be followed up by work on a lode of copper ore tending towards it. (These works are being carried on at the risk and cost of these two parties, they paying a royalty to the Australian Mining Company from what they get,) Both mining parties have expressed a desire to rent the surface land in the vicinity of their present workings.—Gold: The Lyndock Valley Company's stamping-machinery has commenced work; the pregress made is not much at present; about 5 ozs. of gold were obtained from 10 tons of quartz, taken near the surface. The company report and show samples of quartz from the lower levels to the eye more stocked with gold than are the surface specimens, so that the hopes entertained of ultimate success are not lessened.

YUDANAMUTANA COPPER.—The superintendent (Feb. 27) states:—"I have to advise a further shipment of 17 tons 11 cwts. of copper, and intend shipping a similar quantity on Monday next. There is now on the road and at the mine 47 tons of metal. I am in treaty with parties to take contracts for another 10,000 tons of firewood." Capt. Anthony (Feb 16) reports:—"Blinman Mine: The men are still employed stoping the back and bottom of the 10 fm. level; the ore averages 15 per cent. as broken. Two furnaces have been at work during the month. Ores smelted: 73 tons of burrows, 97 tons of smalls, 24 tons of dressed ores, and 24 tons of halvans, which have produced 31 tons of metal. I have dispatched 25 tons of copper to port, and have now on hand 23 tons. The quantity of wood delivered to date is 6718 tons."

WORTHING.—Bremer Mine, Feb. 20: The sinking of the engine-shaft was being carried out with all possible dispatch, rich stones of ore being met with in going down. A winze has been sunk from the 63 to the 73 fm. level, carrying a splendid lode all the way; in fact, the best lode for ore ever seen in the mine. At the 73 fm. level the lode was 13 ft. wide, almost solid ore, and this of a better description than hitherto met with, the quality having increased from 8 to 12 per cent.—an increase so great, that from one furnace enough has been realised to more than cover the whole costs of the month. Quantity of ore on hand, 214 tons; regulus delivered and on hand, 17 tons.

PORT PHILLIP AND COLONIAL GOLD.—The quantity of quartz crushed for the four weeks of January was 3524 tons, yielding 946 ozs. 11 dwts. of gold, or an average of 5 dwts. 9 grs. per ton. The receipts were 3749*l.* 4s. 1d.; payments, 4833*l.* 2s. 11d.; loss, 1083*l.* 18s. 10d.; less balance in hand, 981*l.* 14s. 3d. =102*l.* 4s. 7d. Port Phillip Company's proportion, 66*l.* 9s. The payments include 100*l.* paid for stock of firewood and timber. Return for February four weeks:—Quantity of quartz crushed 4487 tons, yielding 1252 ozs. 2 dwts of gold, or an average of 5 dwts. 14 grs. per ton. A remittance of 294*l.* 10s. 5d., on account of stores, has been received. All the machinery, both at the mine and reduction works, was in good working order, and the mining manager reports that from the general appearance of the stopes at present there is reason to expect a turn for the better will again shortly take place in the yield.

ENGLISH AND AUSTRALIAN COPPER.—The quantity of coal at Kooringa was 1348 tons; at Kapunda, 1017 tons; and at Port Adelaide, 1173 tons. All the fires at the Port works were in full operation, except one roaster and one refinery out of repairs. There are 200 tons of copper in course of shipment.

FORTUNE COPPER (W.A.).—Capt. Pemberthy (Jan. 31) reports:—"Sampson's whim-shaft, in the 40 fm. level north-east end, is driving by four men; lode much improved, producing ½ ton of lead ore per fathom. No. 1 stope, in back of the 40, is working by two men; lode 3 ft. wide, producing 3 tons of lead ore per fathom. The same remark will apply to No. 2 stope, in back of the 40 fm. level. No. 2 winze is set to two men, at 6*l.* 10s. per fathom; lode 2 feet wide, producing 2 tons of lead ore per fathom. The 30 fm. level, north-east end, is set to four men, at 6*l.* per fathom; lode 3 ft. wide, producing good stones of lead ore. No. 1 stope, in back of the 30 south-west, is set to two men, at 3*l.* 8s. 9d. per fathom; lode 2 ft. wide, producing 2 tons of ore lead ore per fathom. No. 2 stope, in back of the 30 south-west, to two men, at 3*l.* 6s. per fathom; lode 3 ft. wide, producing 3 tons of lead ore per fathom. No. 3 stope, in back of the 30 south-west, is set to two men, at 3*l.* 5s. per fathom; lode 2 ft. wide, producing 1¼ ton of lead ore per fathom. No. 1 stope, in back of the 20 south-west, is set to two men, at 3*l.* 2s. 6d. per fm.; lode 3 ft. wide, producing 1 ton lead and 1¼ ton of copper ore per fathom. No. 2 stope, in back of the 20 south-west, is set to two men, at 3*l.* 10s. per fathom; lode 3 ft. wide, producing 3 tons of lead ore per fathom. We have dressed this month 60 tons of lead ore, of from 75 to 80 per cent., and 10 tons copper ore, of from 17 to 18 per cent.; also sent to port 60 tons. There is in store at the bay 124 tons of lead and 28 tons copper ore."

CADIANGULLONG COPPER.—During the month there were sampled from the mine 112 tons of ore, of a quality ranging from 7¾ to 32⅜, average 12¾ per cent. for copper, and yielding by assay 14¼ tons of fine copper. There have been shipped to London, per Paramatta, 14½ tons of fine copper. By the end of the month 10 tons more would be completed at the works. Ore on hand, 30 tons; metal slags, 160 tons; wood, 1400 tons.

YORKE PENINSULA.—The committee of inspection (Feb. 25) report that the ore raised from the lode on the south side of the 35 fm. level recently discovered had been assayed, and found to contain 18⅜ to 27½ per cent. of copper. Capt. Semmens writes—"You will find it a good sample of ore—7½ tons. There are from 15 to 20 tons more, which can be dressed up to the percentage of No. 2 (18⅜), but this cannot be done without water, and it will not pay to keep the engine working for that purpose only. No doubt the mine will work again some day, and then it can be dressed up. This lot of ore is entirely from the new discovery, and I am sorry I have not had time to raise more of it." The ore in question has been shipped to London by the Canterbury.

SCOTTISH AUSTRALIAN.—The directors have advices from the superintendent at Sydney (Feb. 21), with reports from Lambton Colliery to Feb. 19. The sales of coal for January amounted to 15,639 tons. Mr. Morehead, the superintendent, writes—"I have still a very satisfactory report to make of the progress of this undertaking, the usual returns, &c., relating to which are enclosed. We may be said practically to be doing as much business as our present appliances admit of." Mr. Croudace, the viewer, reports—"Our coal continues to look well in all the leading places. The framing for the new pit is nearly completed. I am glad to say we have reduced the small coal heap very considerably." The first prize medal of the Intercolonial Exhibition at Melbourne, just closed, has been awarded to the company for their Coal exhibited there.

From Sydney (N.S.W.), we learn that the PEAK DOWNS COPPER MINING COMPANY directors, in their report to the eight half-yearly meeting of shareholders, stated that favourable progress had been made in every department of the company's works. In consequence of suggestions by Mr. C. W. Roberts, a member of the board, who visited the mine last spring (September), reductions in the cost of smelting have been made, and his visit has otherwise proved, in many respects, beneficial to the interests of the company. The cost of raising the ore since June 30 has been 1*l.* 17s. 1d. per ton, a reduction of 4s. 7d. upon previous rates. The directors are taking measures for increasing their staff of miners, to keep pace with the extended facilities of the smelting department. The smelting operations have also been carried on satisfactorily, three and four furnaces having been constantly employed. The 1582 tons of ore received from the mine has produced 347 tons of copper. The cost of smelting was 16*l.* 7s. 10d. per ton of copper, showing a reduction of 9*l.* 6s. 11d. per ton on previous rates, arising from improvements in the construction of the furnaces, causing less repairs, the better quality of fire-bricks now made, and the reduced rates paid to the smelters. Seven furnaces are now complete, and the refinery will be ready for use in a few weeks. As soon as greater facilities of carriage can be obtained and the number of miners increased the furnaces now erected will turn out from 30 to 40 tons of copper weekly. The scarcity of teams to convey the copper to port as fast as produced is the only obstacle remaining to be surmounted to ensure the complete success of the company. The directors are giving every attention to the subject, and hope to effect arrangements, but, as a last resourse, the company would become its own carrier.

From Western Australia, the accounts from the mines are very favourable, particularly from the GERALDINE MINES. The captain reports that the lode being worked in this mine is very regular, and in places is as much as 3 feet wide of solid galena: 230 tons of lead ore from this mine is now being landed from the Zephyr at the London Docks, and the quality of the same is well worthy inspection.

A small but very beautiful diamond has been found in a claim at Young's Creek, near Beechworth. The stone is perfectly white, and the crystallisation well defined. It is the second diamond found there.—*Melbourne Argus.*

MINERAL WEALTH OF THE PACIFIC.—**The history, progress, and development of the American Continent during the past quarter of a century has no parallel in ancient or modern times. Europe and Asia have remained comparatively ignorant in reference to the true value of that continent. It was only when the necessities and wants of Europe required it that the mind was directed to a consideration** of the probable products which America could supply, in order to make good the deficit occasioned by an increasing population or scarcity of agricultural products. A few travellers had related their experience, and published their journals, which had a limited sale, and thus we had a confused idea that America was an immense country—that in some places there were vast forests, in others extended prairies and great mountains, that the lakes were of wonderful extent, and the rivers marvellous in length; that cities were building, and increasing in population. It may safely be affirmed until the great failure in the potato crop in 1847 comparatively little attention was paid to the probable influence which the products of the United States would have on Europe. Then Europe, and especially Great Britain, felt the pressure of a population with supplies inadequate for their support, and was compelled to look to the United States for means to fill up the void. How promptly this demand was responded to was shown by the fact that in 1846 the total value of exports, the products of the United States, was 20,000,000*l.*, while in 1847 it had increased to 30,000,000*l.* Then the wealth and splend'd products of the new continent began to be appreciated. America had long been a market for English manufactures; she was able to buy all that she required with the products of her soil. Emigration took a fresh start, the march was westward, and never ceased till it reached the Pacific. Progress has been, as it were, a leap of ages in a single decade. The earth has produced corn sufficient to supply the granaries of the world. Coal has been raised in inexhaustible quantities for her manufactories, her steam power, and her thousand necessities. A new element, petroleum, a rock or mineral oil, a natural product of the decomposition of organic matter, was discovered in 1847. The supply in 1859 was 325 barrels; in 1861, 184,927 barrels; and in 1864 it amounted to the enormous number of 3,000,000 barrels. Again, let us examine the statistics of coal. The total production in 1850 was 1,220,000*l.*, and in 1860 it had increased to 3,800,000*l.*, being at the rate of 169·9 per cent. In metals we find that in 1860 there was 2,514,222 tons of iron mined in the United States, the value of which was 4,000,000*l.* In the region of Lake Superior the product of the mines was in 1855 only 1445 tons; in 1862, 115,721 tons; in 1863, 185,257 tons; and in the year 1864 it had reached to the enormous amount of 235,123 tons. We find that the Jackson Iron Company par value of shares was 20*l.*, present price 120*l.*; Cleveland Iron Company shares, par value 3*l.*, present price 15*l.*; Lake Superior Company, par value 2*l.* 10s., present price 12*l.* This last company was chartered in 1861, with a capital of 50,000*l.*, and has paid dividends of 69,000*l.* We give these statistics to prove the wonderful resources of America, and to show that all that is required is capital to develope her mines, which have no equal in the world. The history of the states and territories of the Pacific borders on the marvellous, but the closer they are scrutinised the greater does their wealth appear; see the effect which their minerals have already produced upon the world. The first faint whispers of the discovered treasures of the earth were received with incredulity; but when the actual returns were made by Government officials; when mineralogists, whose testimony was indisputable, published their reports; when the metal, in all its brightness, purity, and wealth, came pouring into the coffers, the mints, and the counting-houses of Europe, then incredulity gave place to wonder and astonishment. All classes then flocked to the Pacific. The poor, the rich, the old, the young, the decripid, went; merchants, doctors, lawyers, loafers, all had gone. Brethren of the creeds of Calvin, Luther, and Penn, the admirers of Voltaire, and the fellow-thinkers of Paine, gave their quota to the motley crowd; and what has been the

result? Far beyond all that the Magi could have foretold or dreamed of. Gold and silver are embedded in the quartz of the Pacific to an unlimited extent, and sufficient to supply the demands of the world for centuries to come. The official report for 1866 of the product of gold and silver from California, Nevada, Idaho, and Mantana, is $106,000,000. With such evidence before us as this in existence, is it to be wondered at that the brain becomes dazzled with figures? Europe has capital to such an extended degree that people are satisfied with 3, 4, and 5 per cent., when, by a little enterprise and careful examination of the product and wealth of the mines of the New World, they might with perfect safety receive from 25 to 50 and 75 per cent. on their investment. The following dividends were declared for the month of February, 1867:—Crown Point, $80 per share; Savage, $100; Yellow Jacket, $100; Imperial, $15; Hale and Norcoss, $125.

ROYAL COPPER MINES OF COBRE.—The advices received by the last West India packet are of a most satisfactory character, the works on the reduced scale being still carried on, and a fair profit for February having been made, while the produce for March was expected to be equally favourable. The Hampshire had been dispatched with a good cargo of 745 tons on March 20, and the loading of the next ship, the Gitanilla, was being proceeded with.

GOLD IN WALES.—The Vigra and Clogau Mining Company have received 345 ozs. 13 dwts. 4 grs. of gold, the produce of 15 days' working; of this quantity 341 ozs. 2 dwts. 4 grs. were obtained from 440 lbs. of mineral, being an average yield of 14 dwts. 13 grs. per lb. of stone.

EAST WHEAL ROSE CONSOLS.—The favourable opinions entertained by the different practical authorities who inspected this property, before the company decided as to its purchase, are being more than confirmed as operations progress. The ore now being brought to surface is described as possessing precisely the same mineralogical conditions as that from Old East Wheal Rose, and, upon assay, it has yielded as much as 38 ozs. of silver, and 75¼ per cent. of lead per ton. The generally encouraging prospects of the mine have induced the executive to organise a system of development by which the merits of the main features of the enterprise will be speedily tested, and the most sanguine anticipations are entertained as to the results. The deep adit level is being driven night and day, and already one of the several lodes has been intersected, presenting—to use the words of an inspecting agent—"the most extraordinary indications;" but the chief object to be attained by the continuance of the deep adit is to reach the junction of some important lodes, the importance of which has been pointed out by one of the West Chiverton agents. There seems reason to believe that, with a judicious and economic management, this mine may prove itself to be no mean representative of the Chiverton district.

SOUTH FOWEY CONSOLS.—In another column will be found the details of a meeting of influential local gentlemen interested in mining, held for the purpose of taking the necessary steps for commencing the working of South Fowey Consols. The Rev. Dr. Treffry (who occupied the chair), and Messrs. E. Brydges Willyams, H. West, W. S. Sutton, and W. Browne, were elected the committee of management; Mr. W. Polkinghorne was appointed purser; Mr. Jehu Hitchins, the London secretary and agent; and Messrs. Willyams, Treffry, West, and Company, of St. Austell, bankers. A call of 5s. per share on 6000 shares was made.

DEVON GREAT MARIA.—At an extraordinary general meeting, on Wednesday, it was unanimously agreed to dissolve the company, with a view to its immediate re-constitution, and upon terms by which the existing shareholders will receive as an equivalent an increased interest in the new company, in the shape of fully paid-up shares, and also a rateable division of cash. In other words, each present shareholder will occupy a position somewhat resembling that of an ordinary promoter. The new company will have a capital of 20,000*l.*, divided into 10,000 shares, instead of (as in the case of the old company), 50,000*l.* The sum of 6970*l.* will be charged for the mine, &c., which will be divided in fully paid-up shares, amounting to 4678*l.*, and 2292*l.* in cash. It appears that the liabilities of the old company do not exceed 700*l.*, against which there are available assets, thus leaving the property free, with a large steam engine (55-in. cylinder), with three 10-ton boilers, which were purchased and paid for in May last. The basis of re-construction was unanimously approved. Messrs. Pownall and Spargo were appointed liquidators.

COAL MARKET.—The arrivals this week only amount to 56 ships. Business in all descriptions of coal has continued fairly active, at an advance of 3d. to 6d. per ton on the quotations of last Friday. No market on Good Friday. Hetton Wallsend, 19s. 9d.; Haswell, 19s. 6d.; South Hetton, 19s. 6d.; Eden Main, 17s. 6d.; Hetton Lyons, 16s. 9d.; Gosforth Wallsend, 16s. 9d.; Hasting's Hartley, 17s. Unsold, 8 cargoes; at sea, 30 ships.

EXPORTS OF COAL.—By the Monthly Circular of Messrs. Higginson, Liverpool, we learn that the quantity of coal exported in March was 644,719 tons, against 779,924 tons in the corresponding month of 1866, showing a decrease of 135,205 tons. The particulars are—From the Northern ports, 317,336 tons; Yorkshire, 28,117 tons; London, 3560 tons; Liverpool, 35,761 tons; Severn ports, 206,974 tons; and Scotch, 52,971 tons. The decrease was—Northern ports, 47,225 tons; Yorkshire, 2445 tons; London, 1459 tons; Liverpool, 20,674 tons; Severn ports, 60,144 tons; Scotch ports, 3258 tons. Total January and March, 1,771,746 tons; same time last year, 1,870,818 tons—showing a decrease of 99,072 tons.

COAL DUTY.—By a return just issued it appears that the coals brought to the metropolis (within the limits of the coal duty radius) in the year 1866 was 6,020,182 tons. In the year the gross amount of duty at 9d. for the Metropolitan Board of Works was 211,644*l.* 3s., and the nett amount 187,102*l.* 9s. 3d. The gross amount of the 4d. duty, for the City of London works, &c., amounted to 94,064*l.* 1s. 4d., and the nett amount 83,156*l.* 12s. 10d.

DISCOVERY OF A NEW COAL FIELD IN CHESHIRE.—The River Dee Company on Saturday morning last received information to the effect that a seam of coal 10 feet thick had been struck upon their property in the vicinity of Queen's Ferry. Some time since a firm, which had entered into preliminaries for the purchase of the estate, forfeited a sum of money equal to 10 per cent. of the purchase. It is said that the company will be benefited to the amount of one-half of its present value by this unexpected discovery.

On the Stock Exchange an average amount of business has been transacted in Mining Shares during the week. The following quotations were officially recorded in British Mining Shares:—Great Laxey, 18, 18½; Great Wheal Vor, 17½, 18¼, 18¼, 18; East Caradon, 5⅞, 5¾; North Wheal Crofty, 4¾; Wheal Buller, 25; Clifford, 5½; East Basset, 21; East Grenville, 2¾; Stray Park, 1¾; Prince of Wales Mine, 2¼, 2⅜, 2½; West Chiverton, 72. In Colonial and Foreign Mining Shares the prices were:—Scottish Australian, ⅜, ½, 15-16ths; Port Phillip, 11-16ths; Chontales, 2⅛, 2¼; Don Pedro, ⅛, ⅜, 9-16ths, ⅜, prem.; United Mexican, 2⅜, 2⅛, 2½; Linares, ¾; St. John del Rey, 55½, 55½.

The Bank of England return for the week ending on Wednesday evening shows no variation requiring particular notice. In the ISSUE DEPARTMENT there is shown an increase in the notes issued of 163,705*l.*, represented by a corresponding increase in the coin and bullion on the other side. In the BANKING DEPARTMENT there is shown on the liability side a decrease in the "public deposits" of 312,482*l.*, and a decrease on the "other deposits" of 245,043*l.*; together, 557,525*l.*; an increase in the "seven day and other bills" of 29,825*l.*, and an increase in the "rest" of 11,962*l.*: together, 41,787*l.*=515,738*l.* Against this there is on the asset side of the account a decrease on the "other securities" of 436,538*l.*, and an increase in the "Government securities" of 50,000*l.*=386,538*l.*: leaving a decrease in the reserve of notes and coin of 129,200*l.*

The petition for winding-up the London Engineering and Iron Shipbuilding Company (Limited) came before the Master of the Rolls, on Thursday, and was dismissed, and the petitioners were ordered, not only to pay the costs of the company, but also those of the shareholders opposing the petition.

The Scotch papers state that Mr. Archibald Geikie has been appointed director of the Geological Survey of Scotland. The general survey of Great Britain has hitherto been under the direction of Prof. Ramsay, and has already been going on for a period of eight or nine years. With the view of expediting the undertaking, the staff of surveyors, both in England and Scotland, has been largely augmented, and Mr. Geikie has been entrusted with the entire superintendence and responsibility of the Scotch section, with which he is so thoroughly acquainted.

Mr. Shea reports the discovery of gold-bearing gravels in the river valleys of Central New Brunswick, and, judging from similar deposits in California which have proved rich in gold, he believes that the New Brunswick beds may be worked at a profit.

Great lawlessness prevails in the coal mining regions of Pennsylvania, gangs of ruffians controlling the miners, and generally interfering with mining operations. Some 60 persons have been murdered there within a few months, and the State Legislature has organised a special armed patrol to maintain the peace, the ordinary authorities being too weak to do anything.

In Canada there are 73 gold mines, employing 708 miners. The yield of gold for the last three months is valued at 138,191*l.*

The applications for shares in the North Chiverton Silver-Lead Mining Company have considerably exceeded the number anticipated. The list has been finally closed, and the shares apportioned.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, APRIL 18, 1867.

COPPER.	£ s. d.	£ s. d.
Best selected..p. ton	82 0 0-	83 0 0
Tough cake and tile	80 0 0-	—
Sheathing & sheets.	83 0 0-	—
Bolts	84 0 0-	—
Bottoms	88 0 0-	—
Old (Exchange)....	70 0 0-	—
Burra Burra	83 0 0-	—
Wire ..... per lb.	0 0 11¼	
Tubes ..... "	0 0 11¾	

BRASS.	Per lb.
Sheets ..... per lb.	9d.-10d.
Wire ..... "	8½d.-9¼d.
Tubes ..... "	10¾d.- —
Yellow Metal Sheath.p. lb.	7¼d.- —
Sheets ..... "	7 d.- —

SPELTER.	Per ton.
Foreign on the spot	21 0 0
" to arrive	21 0 0

ZINC.	
In sheets	28 0 0

TIN.	
English blocks	89 0 0
Do., bars (in barrels)	90 0 0
Do., refined	92 0 0
Banca	93 0 0
Straits	£85 0 0- 85 10 0

TIN-PLATES.*	Per box.
IC Charcoal, 1st qua.	1 10 0- 1 12 0
IX Ditto, 1st quality	1 16 0- 1 18 0
IC Ditto, 2d quality..	1 6 0- —
IX Ditto, 2d quality..	1 12 0- —
IC Coke	1 4 6- 1 5 0
IX Ditto	1 10 6- 1 11 0
Canada plates,p.ton	13 10 0- —
Ditto, at works	12 10 0- —

IRON.	Per ton.
Bars Welsh, in London	6 10 0- —
Ditto, to arrive	6 10 0- —
Nail rods	7 0 0- 8 0 0
" Staffd. in London	7 10 0- 8 10 0
Bars ditto	7 10 0- 9 10 0
Hoops ditto	8 12 6- 9 12 6
Sheets, single	9 10 0-11 0 0
Pig No. 1, in Wales	4 5 0- 4 10 0
Refined metal, ditto	4 0 0- 5 0 0
Bars, common ditto	5 15 0- 6 0 0
Do. mrch. Tyne or Tees	6 10 0- —
Do., railway, in Wales	5 15 0- 6 0 0
Do., Swed. in London.	10 7 6- —
To arrive	10 10 0- —
Pig, No. 1, in Clyde	2 14 0- 3 5 0
Do. f.o.b. Tyne or Tees	2 9 6- —
Do. Nos. 3, 4, f.o.b. do.	2 6 6- 2 7 0
Railway chairs	5 10 0- 5 15 0
" spikes	11 0 0-12 0 0
Indian Charcoal Pigs, in London p. ton	7 0 0- 7 10 0

STEEL.	Per ton.
Swed., in kegs (rolled)	14 0 0-14 10 0
" (hammered)	16 0 0-16 10 0
Ditto, in faggots	16 10 0-17 10 0
English, spring	19 0 0-23 0 0

QUICKSILVER (p. bottle)	6 17 0- —

LEAD.	Per ton.
English Pig, com.	19 17 6- —
Ditto, LB	20 0 0-20 5 0
Ditto, WB	22 5 0- —
Ditto, ordinary soft	20 0 0-20 10 0
Ditto, sheet	20 15 0- —
Ditto, red lead	20 15 0- —
Ditto, white	27 0 0-30 0 0
Ditto, patent shot	23 0 0- —
Spanish	19 2 6- —

* At the works, 1s. to 1s. 6d. per box less.
† A Derbyshire quotation: not generally known in the London market.

REMARKS.—No kind of improvement whatever has occurred in the Metal Market during the past week; everything still remains in a most inanimate and lifeless condition, and there does not appear any disposition on the part of buyers to give out their orders at present, or to enter into any transactions whatever. The uncertain state of affairs on the Continent, and the continued fear that the present condition of peace may not last much longer, but that France and Prussia are drifting into war with each other, the results of which, of course, it is quite impossible to foresee, still tend to continue the present unfavourable position of commercial affairs, and to retard any improvement which might otherwise arise. Although money is still very plentiful, and the present rate of interest very low, yet such appears to be the continued want of confidence that these facilities cannot be made available, and capitalists find it very difficult to place their money with anything like advantage. It is very unfortunate that this state of things should continue for so unprecedented a length of time, as it is calculated to cast a shade of gloom over our commerce; still we must hope that the time is not very distant when a brighter prospect will be before us, as it seems not unreasonable to anticipate that a change for the better must come ere long, and very welcome will it be when it does arrive, to cheer us after so long a period of dulness and inactivity; and we can only express our earnest hope that when the change does come it may be such as to cause us to forget the gloom of the past in the prosperity of the present.

COPPER.—The market for this metal is almost at a standstill, transactions being exceedingly limited, and prices still so uncertain that it is difficult to quote with anything like accuracy: 50 tons of English tile have been sold during the week at 77*l.*, and there are sellers of Chili bars at 71*l.* 10s.

IRON.—In Staffordshire the general result of the quarterly meetings has been to recognise the gradual, though not very extensive, improvement in the demand which has taken place during the last two or three months. The orders are, as yet, far from sufficient to keep the works in full operation, but there is more doing, and there appears rather a tendency to further extension. The demand from the East Indies is the best feature of the trade, but the Australian and continental orders are increasing, and home buyers show somewhat more disposition to come into the market. The state of railway finance keeps down the demand on their account, and as yet the United States is ordering but lightly. In Welsh, now that the quarterly meetings are over, it is announced that very few additional engagements have been entered into on the part of buyers, and there is still a large amount of caution evinced in giving out contracts. On the whole, however, the tendency of the trade is to improvement, and with a slight addition to the present demand there would be soon a tangible increase in employment at the works. From America it cannot be said that the enquiry is quite so good as it was. Home business remains comparatively quiet, but as compared with a month ago there is a decidedly better feeling evinced. In Swedish iron the demand is only moderate. In Scotch pig-iron the amount of business during the past week has been upon the most limited scale. Prices have remained for the greater part of the week without attention, at 52s. cash, but the last advices from Glasgow quote the price as 52s. 1d. cash.

LEAD.—A fair business is still doing, and prices becoming firmer.

TIN.—On Monday the smelters of English announced a reduction of 3*l.* per ton, making present prices 89*l.* for blocks, 90*l.* for bars, and 92*l.* for refined. This reduction has not, however, had the effect of causing any improvement in the demand. The market for foreign continues very quiet. At the commencement of the week a small parcel of fine Straits was sold at 86*l.* cash, and holders were quite disposed to part with their parcels at the same price, or even 85*l.* 10s., but buyers could not be found. Latterly there has been no sales, but there is little doubt that 85*l.* cash would be now accepted.

SPELTER.—The market remains very dull, and the amount of business very small indeed. We still quote 21*l.* for parcels on the spot.

TIN-PLATES.—Makers are still doing a fair business, but the prices of the quarterly meeting are not yet obtained, although there is a nearer approach to them than for some time past.

STEEL.—A good business is still doing in foreign.

QUICKSILVER.—Prices remain without alteration.

The settlement of the fortnightly account in the MINING SHARE MARKET took place on Tuesday, and was particularly heavy. Very large purchases had been made for investment by the public, and stock to the amount of many thousands of pounds was in consequence taken off the market. Among the mines mostly dealt in were West Chiverton, Prince of Wales, Chiverton Moor, North Crofty, East Caradon, Marke Valley, Great Retallack, Wheal Seton, West Seton, &c. West Chiverton shares leave off 71 to 73; the 110 fm. level branch, as far as cut into, is worth 15*l.* per fathom. The 100 east, 60*l.*; the 100 west, 80*l.* per fathom. Great Retallack shares have been in demand at 3⅛ to 4; the lode in the south end, at No. 2 shaft, for 2 fathoms high is worth 2 tons of lead per fathom, and the bottom of the shaft improved to 1⅛ ton per fathom. Prince of Wales shares left off at our last very firm, buyers at 55s. to 57s. 6d., but the next morning were knocked down by an old report of Capt. Charles Thomas, published without date, and if not for the occasion certainly much to the pecuniary satisfaction of the "bears." Of that report no one will regret its purport, and the use made of it, more than Capt. Charles Thomas will himself before long. The bottom level has already falsified his predictions in the main particular, and the agent satisfactorily shows how wrong he is in others. It used to be said that the ore was too rich to last in the shallow levels, and yellow ore would be preferred for a continuance in depth; and now that the 55 shows more yellow ore, it is put down as a "falling off in quality." We have upheld the mine, with the strongest conviction in favour of the truthfulness of the agent's reports, knowing something of the man, and remembering that Captain Gifford has known every inch of the mine from its commencement, and the district in which it is situated nearly all his life, and is, therefore, better calculated to judge of its capabilities than the casual inspector of an hour, who sees not a sequence of changes and events, but just as much as his tallow candle shows him for the moment. It is for this reason we generally recommend shareholders in mines to rely upon the reports of their agents, when known to be capable and trustworthy, in preference to casual or market inspectors. In reference to Capt. Gifford, also, we may observe that his reports and predictions were fully confirmed by the manager of the Devon Great Consols, a gentleman who has managed those extensive mines since their commencement, and may fairly be presumed to know as much of this district of the East as the manager of a tin mine in the West. Mr. Jehu Hitchins, also, who has had more experience in every quarter of the globe than Captain Charles Thomas, fully confirms Captain Gifford's last week's report, and writes to us also—"We have a trump, notwithstanding Capt. Charles Thomas's report, which our samplings will sufficiently contradict." The latest report of the mine states the various points in operation continue of the same value as last week, with the exception of the 55 east, which has improved to 25*l.* per fm., making the aggregate value 215*l.* per fm. The shares leave off 53s. to 55s. The sale of ore realised (less the carriage) 1160*l.* Chiverton Moors have been largely dealt in, and leave off 5¾ to 6. Bedford United, 20s. to 25s.; Bryn Gwiog, 16 to 18. Chontales Gold, 2⅛ to 2⅜; the advices are more favourable, and will be found elsewhere. West Wheal Seton, 130 to 135; at the meeting a dividend of 3*l.* per share was declared. The accounts showed a profit of 1263*l.* 0s. 3d. for two months, and a balance in hand, after payment of dividend, of 572*l.* 14s. 3d. The ores sold, and to be credited in next account, realised 5867*l.* 1s. 5d. Clifford Amalgamated, 5 to 5¼; Drake Walls, ⅜ to ½; East Russell, 2¾ to 3; East Wheal Grenville, 2½ to 2⅝; Frank Mills, 22s. to 25s.; Frontino and Bolivia, ⅛ to ¼; Grambler and St. Aubyn, 4 to 5; Great Laxey, 17½ to 18; Great North Laxey, 25s. to 27s. 6d.; Herodsfoot, 32 to 34; Marke Valley, 4¼ to 4½; North Treskerby, 1⅞ to 2; North Downs, ¼ to ½; Okel Tor, 20s. to 22s. 6d.; Prosper United, 3 to 3¼; Rosewall Hill and Ransom United, 35s. to 40s.; South Caradon, 320 to 330; Tincroft, 12 to 13; West Caradon, 9¼ to 10; Wheal Chiverton, 6¼ to 6⅜; Wheal Grenville, 19s. to 21s.; Wheal Mary Ann, 13 to 14; Wheal Seton, 97½ to 102½; Wheal Uny, 25s. to 30s.; West Wheal Kitty, 10s. to 12s. 6d. East Lovell, 8¼ to 9; the 40 east is worth 35*l.* per fm.; west, 80*l.* per fm.; and other parts looking well, worth in the aggregare 200*l.* per fm. North Wheal Chiverton, 4½ to 5; we understand that all the shares have been allotted, and the list closed. North Crofty, 4⅛ to 4⅞; the 183, east of Praed's, is worth 60*l.* per fm., and the prospects of the mine never so good as at present. Rose and Chiverton, 6 to 6¼; Great Wheal Vor, 18½ to 19½; the lode at Ivey's shaft is worth 40*l.* per fm.

As Saturday will be a partial and Monday a close holiday, we understand no Lists will be issued till Tuesday.

P.S.—Since this article was written a telegram has been received from the Prince of Wales Mine, showing an improvement in the 45 west to 60*l.* per fm., and in the winze below the 45 to 30*l.* per fm.

There has been rather a large business done in mine shares on the Stock Exchange during the week. Great Wheal Vor shares are firmer, at 18¼ to 19¼. West Chiverton shares continue in demand, at 71½ to 72½; the branch cut in the 110 cross-cut is worth 15*l.* per fathom, and the indications for cutting a good lode are highly favourable; the 100 east is valued at 60*l.*, and the 100 west at 80*l.* per fathom. Chiverton shares are steady, at 6¼ to 6½; Chiverton Moor, 5½ to 6⅛; North Crofty shares have rallied to 4⅛, 4⅜; North Chiverton is favourably reported on, and shares are being dealt in. Prince of Wales, 52s. to 54s.; the reports are good on this mine. Foreign mines have been dealt in to a moderate extent. Don Pedro shares have been in good demand, and close ⅛ to ⅜ prem.; Anglo-Brazilian, par to ⅛ prem.; St. John del Rey, 55 to 57; United Mexican shares have been more enquired for, and close 2¼ to 2½; Vigra and Clogau shares have risen to 11, 12, on a rich discovery of gold, from which about 2000*l.* worth has been raised, out of about 1 fathom of ground.

At Truro Ticketing, on Thursday, 3609 tons of ore were sold, realising 15,461*l.* 19s. The particulars of the sale were:—Average standard, 114*l.* 8s.; average produce, 6⅛; average price per ton, 4*l.* 5s. 6d.; quantity of fine copper, 221 tons 18 cwts. The following are the particulars of the sales during the past month:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
Mar. 21	3928	£114 8 0	6¼	£4 8 0	14s. 1d.	£70 14 6
" 28	2426	103 19 0	7⅛	5 4 6	13 8	68 6 6
Apr. 4	3035	110 8 0	6⅝	4 7 6	13 6¼	67 14 9
" 11	1586	111 12 0	6⅛	4 2 6	13 5	67 9 6
" 18	3609	114 8 0	6⅛	4 5 6	14 0	69 12 6

Compared with last week's sale, the advance has been in the standard 2*l.* 16s., and in the price per ton of ore about 3s. Compared with the corresponding sale of last month, the standard is about stationary.

The Prices of Tin (Metal) were reduced 3s. per cwt. on Monday, and are now as follows:—Common, 89s.; refined, 92s. The Ore Standard remains as fixed on Friday last.

At Dolcoath Mine bi-monthly meeting, on April 8, a profit was shown on the two months of 1596*l.*; costs, 6671*l.*, including bills 2126*l.*; credits, 8268*l.*, including 150 tons of tin, 8350*l.* (less dues), and copper 205*l.* A dividend was declared of 1432*l.* (4*l.* per share), carrying forward a credit balance of 27*l.* In addition to the ordinary expenditure, about 300*l.* was charged in connection with some extra cost. Dolcoath Mine has returned 825*l.* 10s. on each share, on which 128*l.* 17s. 6d. was called.

At West Wheal Seton meeting, on Tuesday, the accounts for Jan. and Feb. showed a credit balance of 1772*l.* 14s. 3d. A dividend of 1200*l.* (3*l.* per share) was declared. The profit on the two months' working was 1263*l.* Capts. Charles Thomas, Malachi Bath, and John Jennings say—"The tribute pitches are producing their usual quantities of ore."

At Wheal Seton meeting, on April 8, a profit was shown on the two months of 1059*l.*; costs, 2196*l.*, including bills 557*l.* The ores are credited at 3255*l.* (western, 3188*l.*; eastern, 63*l.* only). Crediting the balance in hand at last account 3761*l.*, there appeared a nominal balance of 4827*l.* in favour of the adventurers, out of which a dividend was declared of 990*l.* (3*l.* 10s. per share). Wheal Seton has returned 2441*l.* 5s. on each 58*l.* 10s. share.

At Gonamena Mine meeting, on April 11, the accounts showed a credit balance of 2463*l.* A call of 1s. 6d. per share was made. Capt. R. Pascoe says—"Although our ends are not productive, yet I consider they are of a very promising character, and, judging from their present appearance, I think before another two months we shall have a good improvement."

At Penhale Wheal Vor meeting, on April 9 (Mr. T. Holroyd in the chair), the accounts for the three months ending April 9 showed a credit balance of 386*l.* 14s. 9d. A call of 5s. per share was made. Capts. Chappel and Martin reported that they sold during the past quarter 14 tons 12 cwts. 21 lbs. of black tin. They have at present employed—tutwork, thirty-six men and two boys; tribute, seventeen men, and one man doing pit and timberwork; three fillers and three landers; surface and sundries, five men and two boys; engine-men, four; carpenters and smiths, five men and two boys; surface, three men, eighteen boys, and thirteen girls: total, 114.

At Hallenbeagle Mine special general meeting, on Tuesday, convened for the purpose of considering the present position and future prospects of the concern (Mr. Husband, of Hayle, in the chair), the total liabilities of the mine up to the present time were stated to be about 900*l.* To meet this a call of 4s. per share was made. It was decided to continue the working till June, and during that time to use the flat-rods. The necessity of erecting an engine on Reed's shaft was also decided on, and the secretary was requested to write to the managers of Great North Downs and Wheal Rose, asking them to contribute equal portions of the water charges.

At the Dunraven United Collieries Company (Limited) first ordinary general meeting, held at Cardiff on Saturday, Viscount Malden in the chair, the report and accounts were adopted, showing a balance carried forward, after providing for payment of a dividend at 10 per cent. for the past year. The noble Chairman and other directors congratulated the company on the success of their operations. Details in another column.

At the Fairbairn Engineering Company meeting, on Wednesday, a dividend of 5s. per share was declared, making, with the interest paid to the shareholders in October, a distribution for the year of 7½ per cent. upon the paid-up capital, and upwards of 1000*l.* was added to the unappropriated balance on reserve. The company has made no bad debts, but the extent of its operations has been restricted by the severe financial crisis, and the amount of orders at present on the company's books is much below the usual average. The nett profits of the year amount to 11,204*l.*; the balance left unappropriated March 31 was 3135*l.*, making a total of 14,339*l.* now available for distribution. It was proposed that the future payments to be made to the shareholders at the half-yearly periods in October shall not be by way of dividend of profits, but simply as interest on capital not exceeding a rate of 5 per cent. per annum. Future balances will, therefore, only be struck annually on March 31.

At the Llanberis Slate Company (extraordinary general) meeting, on Monday (Mr. Henry Haymen in the chair), resolutions were passed authorising the issue by the directors of mortgage debentures of the company to an amount not exceeding 10,000*l.*, constituting a charge on the real estate of the company (subject to any mortgage having legal priority), and to be issued upon such terms as the directors may be able to arrange, not being less favourable than the following—"That they be issued at the price of not less than 90*l.* per cent., and bear interest at not more than 7 per cent. per annum; and that they shall rank for all purposes *pari passu* with each other, and shall be repayable in not less than two years from the date of issue, and shall contain power to the

company, with the consent of holders, to redeem them on payment of principal and interest to date of redemption, and further may contain power to the holders to convert them, or any part of them, at the price of issue into shares of the company, having the same amount paid up as the existing shares, at any time before payment or redemption.

At the New Quebrada Company meeting, to be held on Tuesday, the accounts to March 31 will show a debit balance of 2175*l.* 19s. 1d. The report of the directors states that the call of 3s. 4d. per share proposed to be made in January was not made until April 6, and has been almost universally responded to. The directors consider the successful reconstruction of the Quebrada upon a basis more substantial than ever as the best exponent of the unabated value of and confidence in the property and its prospects. The time for exercising the option of stopping the construction of the railway at Palma Sola expires on June 30, 1868, but the directors hope that, as only the sum of 20,000*l.* additional capital will be required to render this restrictive operation unnecessary, it will not be decided on. The issue of B debentures is to be limited to 40,000*l.*, that the contractors' A debentures may not be valueless. The additional information received concerning the mines more than confirms former reports. Specimens of the woods and other vegetable productions of the estates have been received, and some sent to the Paris Exhibition. The difficulties as to title and conveyance have been amicably arranged, and the deeds will now be speedily prepared. The railway contractors, with their staff and plant, will leave England in a few days. Messrs. Lovering and Minton, public accountants, and H. J. Whaley, shareholder, have been appointed auditors for the ensuing year.

Royal School of Mines, Jermyn-street.

DR. TYNDALL, F.R.S., will COMMENCE a COURSE of THIRTY-TWO LECTURES on MAGNETISM, ELECTRICITY, SOUND, LIGHT, and HEAT, at Two o'clock, on MONDAY, the 29th April, at the ROYAL SCHOOL OF MINES. JERMYN STREET, to be continued on every week day but Saturday at the same hour. Fee for the course, £3.
TRENHAM REEKS, Registrar.

PRACTICAL GEOLOGY.—KING'S COLLEGE, LONDON.—PROFESSOR TENNANT, F.G.S., will give a COURSE OF LECTURES ON GEOLOGY, having especial reference to the application of the Science to ENGINEERING, MINING, ARCHITECTURE, AND AGRICULTURE. The Lectures will COMMENCE on FRIDAY, April 26, at Nine A.M. They will be continued on each succeeding Wednesday and Friday at the same hour. Fee £1 11s. 6d.
R. W. JELF, D.D., Principal.

RAILWAY WAGON WORKS, BARNSLEY.

CRAIK BROTHERS are PREPARED TO SUPPLY COAL and COKE WAGONS of EVERY DESCRIPTION, either for cash, or by deferred payments through wagon-leasing companies.

GLAHOLM AND ROBSON,
HENDON PATENT ROPERY, SUNDERLAND,
MANUFACTURERS of ALL DESCRIPTIONS of STEEL, IRON, and HEMP ROPES for COLLIERIES, SHIPS, &c.

CHARLES J. SPENCER AND CO.,
ENGINEERS AND CONTRACTORS,
No. 4, QUEEN STREET PLACE, CANNON STREET, LONDON, E.C

HORIZONTAL ENGINES, of all sizes, suitable for WINDING and other COLLIERY PURPOSES, kept in stock, and made to order. ESTIMATES and PLANS given for BOILERS, SHAFTING, MACHINERY, &c.

BAGILLT OIL COMPANY (LIMITED), FLINT.
MANUFACTURERS OF BLACK GREASE
FOR COLLIERY WIRE ROPES, TRAMS, WAGONS, &c., £5 PER TON.
TORCH AND LAMP OIL, 1s. PER GALLON (Casks free).
LUBRICATING OIL, 1s. PER GALLON (Casks free).

IMPROVED APPLICATION OF WATER POWER.
THE TURBINE.

MACADAM BROTHERS AND CO., ENGINEERS, SOHO FOUNDRY, BELFAST, have been engaged for fifteen years, with complete success, in MANUFACTURING their IMPROVED TURBINES, and can recommend them with confidence.
This machine is applicable to all practicable heights of fall and quantities of water, giving a much higher percentage of power than any other description of water-wheels.
On low falls it has the additional advantage of not being affected by floods or backwater, and it is particularly well adapted for any falls where the quantity of water is variable.
Further particulars on application, also references to turbines now at work on a great variety of falls.

STEAM-BOILERS made by WILLIAM WILSON, LILYBANK BOILER WORKS, GLASGOW, on the most improved principles, for home and export. All boilers made of the best material and workmanship, proved and warranted tight under a high pressure, and delivered at any railway station or shipping port in the kingdom at moderate rates. Lithograph of boilers forwarded post-free on application.

WINDING ENGINE FOR SALE, BY TENDER.—FOR SALE, a 20-in. cylinder ENGINE, 8-ft. stroke, in very good condition, at CALVADNACK MINE, in WENDRON.
Full particulars may be had on application to Messrs. R. H. PIKE and Son, Camborne; or Capts. CHARLES THOMAS and SON, Dolcoath.
Tenders must be sent in on or before the 23d inst.

STEAM ENGINE.—FOR SALE, a 60 in. PUMPING ENGINE equal beam, 10 ft. stroke, with TWO 10 ton BOILERS. This engine is by Messrs. Nicholls and Co., of the Bedford Foundry, Tavistock, and is the best 60 in. engine for sale in Cornwall or Devon.—For further particulars, apply to Mr. JAMES HICKEY, 22, Austinfriars, London.

CHONTALES GOLD AND SILVER MINING COMPANY (LIMITED).—Notice is hereby given, that in conformity with the resolution passed at the last Annual General Meeting, an EXTRAORDINARY GENERAL MEETING of the shareholders in the Chontales Gold and Silver Mining Company (Limited) will be HELD at the London Tavern, Bishopsgate-street Within, in the City of London, on TUESDAY, the 30th April, at One o'clock, to receive a report from the directors.
By order,
C. B. PARRY, Secretary pro tem.
185, Gresham House, London, April 15, 1867.

NEW QUEBRADA COMPANY (LIMITED).
TO THE SHAREHOLDERS.
Having received urgent and most flattering solicitations from many of my fellow-shareholders to become a candidate for one of the vacant seats on the Board of Directors, I beg to announce my intention to offer myself at the meeting to be held on the 23d inst., and respectfully to solicit your votes and interest. Should I be honoured by your choice, I trust that my long and official connexion with the country where your valuable property exists, my intimate acquaintance with everything connected with this company, as well as with the former one, which it has replaced since its formation in 1862, added to unremitting exertions to forward our mutual interests, will enable me to perform the duties of the office in a manner to entitle me to a continuance of the confidence thus reposed in me.
Your obedient servant,
FREDERICK H. HEMMING.
No. 25, Moorgate-street, E.C., April 15, 1867.

MR. JOHN HOSKING, MINING ENGINEER
(Late of Ashburton, Devon).
Mr. HOSKING, having had 20 years' practical experience, OFFERS HIS SERVICES as MINE SURVEYOR, VALUER of MINING MACHINERY, or to INSPECT any MINING PROPERTY, either at home or abroad. Terms on application.—14, Liverpool-street, London, E.C.

MESSRS. DEBENHAM AND CO.
STOCK AND SHARE BROKERS,
No. 37, MOORGATE STREET, LONDON, E.C.
(and at ST. ALBANS),
WANTED TO PURCHASE—New Quebrada and Frontino and Bolivia shares. Sellers to state number and lowest price.

SLATE QUARRY REPORTS.—JOHN BOWER, D.C.L. Oxon, Barrister-at-law, who has been for nine years Manager and Director of the Snowdon Slate Quarries Company (Limited), is PREPARED to INSPECT and REPORT on any QUARRY or SLATE VEIN in NORTH WALES, and his REPORT would include every fact FAVOURABLE or UNFAVOURABLE.
Address, Glydir View, Llanberis.

SHAREHOLDERS IN PUBLIC COMPANIES desirous of avoiding calls and further responsibility will find purchasers on applying to Messrs. BARRETT AND CO., 78, LOMBARD STREET, CITY, and No. 20, SPRING GARDENS, CHARING CROSS. Stocks, shares, mining, and other miscellaneous securities bought and sold. Investment Review on application. Cash advances made.

ON THE MECHANICAL TREATMENT OF METALLIC MINERALS, OBTAINING GOLD, PRECIOUS STONES, &c., FROM ALLUVIAL DEPOSITS.
The PAMPHLET just published on the above subject by Mr. JOHN HUNT (late manager of the Pont Pean Silver-lead and Zinc Works, France), with a description of an IMPROVED MACHINE for the SEPARATION OF ORES, METALS, &c., can be obtained on application to the printer, Mr. R. CUNNACK, Helston, Cornwall, enclosing three postage stamps.

ANALYSES OF COAL, CANNEL, MINERAL OILS, and all OIL PRODUCING MINERALS are UNDERTAKEN by
A. NORMAN TATE, F.A.S.L., &c.,
ANALYTICAL and CONSULTING CHEMIST, and CHEMICAL ENGINEER
(Author of "Petroleum and its Products," &c.),
MOLD, NORTH WALES.
Plans and estimates for oil and chemical works prepared, and their erection superintended.
Assays of metals and their ores carefully conducted.

India Office—Contract for Iron.

BY ORDER OF THE SECRETARY OF STATE FOR INDIA IN COUNCIL.

NOTICE IS HEREBY GIVEN that the DIRECTOR-GENERAL OF STORES FOR INDIA will be READY, on or before Monday, the 29th instant, to RECEIVE PROPOSALS, in writing, sealed up, from such persons as may be willing to SUPPLY—
BEST BRITISH IRON,
And that the conditions of the said contract may be had on application at the India Store Office, Cannon-row, Westminster, where the proposals are to be left any time before Two o'clock P.M., of the said 29th day of April, 1867, after which hour no tender will be received.
GERALD C. TALBOT, Director-General.

TO COAL OWNERS AND OTHERS.

THE LONDON PATENT COAL COMPANY are now GRANTING LICENSES for the USE of their PATENT for the UTILIZATION of COAL DUST. All communications to be addressed to the Managing Director, 26, Martin's-lane, Cannon-street, E.C.

THE COAL TRADE ASSOCIATION OF NORTHUMBERLAND AND DURHAM, and the NORTHERN INSTITUTE OF MINING ENGINEERS, desire to APPOINT a MECHANICAL ENGINEER as their JOINT SECRETARY, at a salary of £400 a year.
Applications, accompanied by testimonials, may be sent to Mr. G. B. FORSTER, Backworth, Newcastle-on-Tyne.

GENERAL MANAGER WANTED, for the SOUTH and EAST HETTON COLLIERIES, in the county of DURHAM. A liberal salary allowed for a thoroughly-qualified person.
Applications by letter, addressed to "The Owners," South Hetton Colliery Office, Fence Houses.

WANTED IMMEDIATELY, a COMPETENT RESIDENT MANAGER for an ANTHRACITE COAL MINE in SOUTH WALES, with unexceptionable references.
Full particulars, stating salary, &c., to be sent by the 6th May to "W. 84," care of Mr. Henry Green, Advertising Agent, 119, Chancery-lane, W.C.

WANTED, a PRACTICAL MANAGER for a large IRON and COLLIERY WORKS in SHROPSHIRE.—Letters, with copies of testimonials, &c., to be addressed to "S. W. S.," care of Messrs. Kingsbury and Co., 4, Birchin-lane, Cornhill, E.C.

WANTED,—A RE-ENGAGEMENT as COLLIERY MANAGER.—Many years' experience and first-class testimonials. No objection to go abroad.—Apply to "H. M.," MINING JOURNAL office, 26, Fleet-street, London.

PARTNERS WANTED.—WANTED, TWO GENTLEMEN TO JOIN with THREE OTHERS in DEVELOPING a COLLIERY in NORTH WALES in a most eligible situation, and already partially developed. The amount each will be required to find will be about £5000.—For particulars, apply, with *bona fide* name and address, to JOHN LEIGH, Solicitor, 30, Brown-street, Manchester.

PARTNERSHIP.—A MINING ENGINEER, of great experience and extensive connections, is DESIROUS of MEETING with a PARTNER, possessing a small capital, to JOIN him in EXTENDING the BUSINESS in one of the largest and most influential cities in the kingdom. The incoming gentleman to keep the books and take the management of the offices in the absence of the advertiser on professional business, a knowledge of which is not absolutely necessary, but would be preferred. Capital required about £200. Mutual references.—Address, "A. Z.," MINING JOURNAL Office, 26, Fleet-street, E.C.

A GENTLEMAN having an extensive connection with merchants, manufacturers, and others, would be GLAD to UNDERTAKE the SALE of PATENTED ARTICLES or INVENTIONS, upon commission.—Apply to Mr. W. T. RAWLE, patent and mining agent, 8, Small-street, Bristol.

THE PROPRIETORS of an ESTABLISHED IRONWORKS, most advantageously situated, comprising BLAST FURNACES and ROLLING MILLS, turning out 400 to 500 tons weekly, of bars, rails, plates, &c., are DESIROUS of MEETING with a PARTNER, who would undertake to superintend the management of the works, or to carry them on by contract. In the present depressed state of the trade, a handsome profit is made. The highest references would be given and expected.
Applications to be addressed to "Ironmaster," care of Messrs. Osborne, Ward, Vassall, and Co., Bristol.

TO OIL MERCHANTS, &c.—THE COPPA OIL COMPANY (LIMITED) are now open to TREAT WITH RESPONSIBLE PARTIES in the principal provincial towns in the kingdom, for the EXCLUSIVE SALE of their CELEBRATED CRYSTAL BURNING OIL, LUBRICATING OIL, and other products. Only such applications will be entertained where sales are guaranteed by responsible parties.—Apply to the COPPA OIL COMPANY (Limited), Padeswood, near Mold, Flintshire.

TO RAILWAY CONTRACTORS, COLLIERY PROPRIETORS, AND OTHERS.—FOR SALE, about ONE THOUSAND TONS of 45 lb. FLANGE RAILS, slightly rusty, in lots of 50 tons and upwards. To be cleared off before the 1st of May.—For particulars, apply to Box 75, Swansea.

TO RAILWAY COMPANIES, CONTRACTORS, COLLIERY PROPRIETORS, &c.—TO BE SOLD, SEVEN HUNDRED TONS unused DOUBLE-HEADED RAILS, 70 lbs. per yard, with a quantity of CHAIRS and FASTENINGS.—For particulars, apply to E. D. TILL, Iron Merchant, 26, Lombard-street, London, E.C.

TO BE SOLD, BY PRIVATE CONTRACT, TWO HUNDRED AND THIRTY TONS of very superior GALENA, from the GERALDINE MINE, WESTERN AUSTRALIA. This ore is well worthy the attention of buyers. To be seen at the London Docks.
For particulars, apply to R. M. HABGOOD and Co., 73, Basinghall-street.

TO BE SOLD, with or without the Minerals, FRON HALL, a FREEHOLD ESTATE, containing SIXTY-EIGHT ACRES, or thereabouts.
Apply to the owner, Mr. E. WALN, Fron Hall, Mold.

SPIEGELEISEN MINES FOR SALE.—An extensive MINERAL PROPERTY, consisting of THREE ADJACENT COMPLEXES, admirably situated near COLOGNE, and with great facilities for shipping either the ORE or manufactured SPIEGELEISEN on the Rhine, are OFFERED FOR SALE. The MINES and BLAST FURNACES are IN FULL WORK, the mines producing about 350 tons per day, capable of increase, and the blast-furnaces yielding 40 tons of spiegeleisen daily, and giving a profit of £2 4s. per ton. Samples of the ore and iron may be seen, and further particulars obtained, by addressing "R. S.," MINING JOURNAL office, 26, Fleet-street, London.

SULPHATE OF BARYTES FOR SALE, F.O.B. trucks or vessel, at Carmarthen, at a low price.
Address, A. WATERS, Carmarthen.

CHINA CLAY AND STONE.—LANDS to be LEASED at moderate dues.—For particulars, apply to Mr. W. D. KING, solicitor, Camelford.

ESTATE, with SLATE QUARRY, on the BANGOR RANGE, FOR SALE, near a shipping port.—For further particulars, apply to Messrs. BELL and ROBERTSON, Engineers and Surveyors, Trinity-place, 5, Charing Cross, London.

LLANFAIR GREEN AND BLUE SLATE QUARRY COMPANY (LIMITED).—Manager, T. HARVEY, Esq.—TO BE SOLD, FORTY SHARES, at £1 per share. No calls.—Address, "A. B.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

FIFTY SHARES FOR SALE, at a sacrifice (£3 10s. paid, £5 shares), in a FIRST-CLASS GREEN and BLUE SLATE QUARRY (Limited).—Apply to "E. R.," 3, Woodland Cottages, Turnham Green.

PUMP-LIFTS.—TO MINING COMPANIES, AND OTHERS.—The EXECUTORS of JESSE VARLEY, BROOKFIELD FOUNDRY, ST. HELEN'S, LANCASHIRE, having PATTERNS for all sizes of PUMP LIFTS, and being specially PREPARED for their MANUFACTURE throughout, are in a position to supply them at reasonable prices, and with speed.
Estimates for the lifts complete, or price per cwt. for the pump trees alone, forwarded on application.

LEAD ORES.

Date.	Mines.	Tons.	Amount.	Purchasers.
April 12	Harwood	20	£13 10 0	London Lead Co.
	—Frank Mills	50	17 2 6	Treffry Estate.
	— ditto	60	12 11 0	Sheldon, Bush, & Co.
13	Herodsfoot	62	27 13 6	ditto

Sales of LEAD ORE and BLENDE by the MINERA MINES during March quarter:

Date.	Lead ore. Tons.	Lead ore. Value.	Blende. Tons.	Blende. Value.	Total.
January	310	£ 3,981 7 0	101	£ 465 18 6	£ 4,447 5 6
February	465	6,029 3 6	202	786 11 0	6,815 14 6
March	478	6,243 17 0	228	971 13 6	7,215 10 6
Total	1253	£16,254 7 6	531	£2224 3 0	£18,478 10 6

Average price 12*l.* 19s. 5d. per ton of lead ore, and 4*l.* 3s. 9d. per ton of blende.

BLACK TIN.

Date.	Mines.	Ts. c. q. lbs.	Price p. ton.	Amount.	Purchasers.
April 13	Great Wh. Vor.	56 0 2 2	—	£3061 3s—	—

COPPER ORES

Sampled at Harrington Dock Copper Ore Yard on March 28, and sold at Liverpool on April 11:—

		Tons.	Price p. ton.	Purchasers.
Lot 1	ex Surate, from Marseilles	97	£4 2 6	Charles Lambert.
2	ditto	97	3 19 6	ditto
3	ditto	97	3 19 6	ditto
4	ditto	97	4 1 0	James Radley.
5	ditto	44½	6 0 0	Sims, Willyams, & Co
5	ditto	44½	6 0 0	James Keys & Son.
6	ditto	89	6 5 0	ditto

COPPER AND COPPER ORES

Sold at LIVERPOOL, from April 1 to April 13.

Messrs. Pitcairn-Campbell and Co. (April 15) write—The mail from the West Coast, dated Feb. 16, bringing advices of only small charters, had a somewhat favourable effect on the market, and an advance of 10s. per ton on bar copper has been obtained. By the further news, also just received per mail of March 2, it would appear that the charters for the month of February altogether scarcely represent 1900 tons pure copper; therefore, if trade was at all elastic, and not so chronically depressed, further improvement might be looked for. So many elements of distrust are, however, at work for the moment, that reaction to any extent at present would seem hopeless. Anxiety in regard to continental politics has recently had an adverse influence on the market. Quotations are 71*l.* 10s. and 72*l.* for bars, 78s. and 78s. 10s. for ingots, 14s. 3d. for Chili ores and regulus, and 16s. and 16s. 3d. for Barilla. The sales since our last have been—

Mine or ship.	Tons.	Price.
Bars—Coronilla	31	£71 10 0
Bars—Worrall	50	71 10 0
Bars—Second hands	20	71 10 0
Bars—(Urmen.) Scout	100	71 5 0
Bars—Second hands	34	71 10 0
Bars—Worrall	50	71 10 0
Bars—Andes	37	71 10 0
Bars—(Urmen.) Scout	50	71 5 0
Bars—(ditto) ditto	100	71 10 0
Bars—Coronilla	58	72 0 0
Bars—Mersey	37	71 15 0
Bars—Beatrice	40	72 0 0
Bars—Cape Horn	192	£72 0 0
Bars—E. Preston	50	72 0 0
Bars—Eden	21	72 0 0
Bars—Yuca	29	72 0 0
Bars—(Ur.) Glamorgan	50	71 10 0
Ing.—(ditto) ditto	70	78 5 0
Bar.—Yanwath	22	0 16 0
Bar.—Moss Trooper	50	0 16 2
Reg.—Solway Queen	225	0 14 3
Omitted in our last,		
Reg.—Enid	256	0 14 3½

The arrivals during the fortnight have been—at Liverpool, 225 tons regulus, ex Solway Queen; 500 tons regulus and 98 tons bars, ex Eastern Chief; 340 tons regulus and 50 tons bars, ex Zeta; 30 tons bars, ex Ringdove; 360 tons regulus, ex Iota; 700 tons bars and 275 tons ingots, ex Glamorgan; 700 tons regulus and 70 tons bars, ex Glenudal; 70 tons bars, ex M. A. Dixon; 680 tons bars, ex Royal Sam. At Swansea—127 tons ores and 339 tons regulus, ex Pathfinder; 690 tons ores, ex Magnet.

Stocks of copper (Chilian and Bolivian) in first and second hands likely to be available are—

	Ores.	Regulus.	Bars.	Ingots.	Barilla.
Liverpool	1708	4861	4088	807	298
Swansea	5620	3860	213	—	64

Mr. James Lewis (April 15) writes—Notwithstanding the advice by the West Coast Mail, which arrived on the 3d inst., of the charters for the first half of February, being only 753 tons of fine copper, of which 560 tons were in bars—298 to Liverpool and 262 to Havre,—the value of Chili bars was only enhanced 10s. per ton, while ore and regulus showed no change. The mail just to hand gives the charters for the second half of February as 1260 tons of fine, of which 1050 tons are bars. This makes the engagements for the whole month 2013 tons, or about half the average monthly shipments. The copper market has felt the effects of the uneasiness prevailing with regard to political matters, and has been depressed by the large arrivals during the past and previous fortnight, amounting to 5240 tons of fine. The sales have been as follows:—

Mine or ship.	Tons.	Price.
Bars—Good brands	65	£71 10 0
Bars—(Urm.) ex Scout	100	71 5 0
Ing.—Cousins	40	79 0 0
Ore —Knockmahon	280	0 13 8
Ore —At Swansea Tic. 2166		0 14 3
Bars—Good brands	80	71 10 0
Bars—Good brands	40	71 10 0
Bars—Good brands	60	72 0 0
Bars—Good brands	130	72 0 0
Reg.—Huasco	620	£ 0 14 6
Bars—Cape Horn	180	72 0 0
Bars—Good brands	100	72 0 0
Bars—(Ur.) Glamorgan	50	71 10 0
Ing.—(Ur.) Glamorgan	50	78 5 0
Ing.—(Ur.) Glamorgan	20	78 5 0
Bar.—Sundres	50	0 16 3
Bar.—Sundres	22	0 16 0
Reg.—Solway Queen	227	0 14 3

Quotations to-day are 14s. 3d. for ore and regulus, 72*l.* for bars, 78*l.* 6s. for ingots, and 16s. to 16s. 3d. for Barilla.

Stocks of West Coast produce may be considered—Liverpool 7426 tons of fine, Swansea 3121 tons of fine=10,547 tons of fine. April 15, 1866, 9812 tons of fine; quotations, bars 81*l.*, regulus 15s. 6d. April 15, 1865, 4179 tons of fine; quotations, bars 83*l.*, regulus 17s.

The following are the Board of Trade returns for January and February:—

Import.	1867.	1866.	1865.
Ore	5008	7800	10,613
Regulus	4931	3826	2,212
Bars, &c.	1454	920	2,251
Total fine	4380	3785	4,771
Export.—Foreign copper	1348	2509	1,326
Unmanufactured	948	865	386
Manufactured	4080	2556	5,792
Total	6376	5930	7,504

The exports of Chili bar and ingot copper from Liverpool and Swansea to the 31st March have this year been 2315 tons, against 2168 tons last year.

The following is an estimate of the supplies from the West Coast available for the first six months of this year, and a comparison with previous years. At sea and chartered for up to Jan. 1, 1867, representing the arrivals in England to June 30:—

	Bars and ingots. Tons	Regulus. Ore.	Total, fine.
	5103	5491 4374	
In fine	4948	2471 875	8,294
Arrived to date	6545	9296 4560	
In fine	6349	4184 912	11,445

Estimated import for first six months of 1867 19,739

Total export to England from Chili during 1866, 40,083 tons fine; ditto, 1865, 42,526. Total import into England from Chili during 1866, 34,565; ditto, 1865, 40,113. Stock of Chili produce in Liverpool and Swansea Jan. 1, 1867, 7860 tons fine; ditto, 1866, 11,400; ditto, 1865, 4816. From the above, it will be seen that a large portion of the quantity already arrived this yeas is to make up the discrepancy between the export and the import last year (1866), as the export for the fourth quarter was 2574 tons of fine copper in excess of the previous quarter.

COPPER ORES.

Sampled April 2, and sold at the Royal Hotel, Truro, April 18.

Mines.	Tons.	Price.
Devon Great Consols	132	£4 9 0
ditto	128	5 0 6
ditto	125	5 2 6
ditto	123	4 10 0
ditto	122	5 4 0
ditto	120	5 3 6
ditto	118	3 17 0
ditto	115	4 18 6
ditto	114	5 4 6
ditto	113	3 5 0
ditto	100	3 1 6
ditto	99	2 2 6
ditto	90	5 2 6
ditto	54	2 7 6
ditto	43	13 8 6
ditto	32	11 18 6
Marke Valley	94	5 12 6
ditto	80	2 19 0
ditto	60	3 3 6
ditto	55	3 10 6
ditto	53	2 2 6
ditto	45	2 3 6
ditto	33	2 16 6
Brookwood	80	3 6 6
ditto	79	3 14 0
ditto	61	2 14 6
ditto	46	3 2 9
Brookwood	40	£9 5 6
East Caradon	88	3 9 6
ditto	80	4 16 0
ditto	69	2 17 6
ditto	63	3 6 6
Okel Tor	69	2 10 6
ditto	67	1 13 6
ditto	59	1 14 6
ditto	55	3 10 6
ditto	30	7 16 0
Prince of Wales	54	7 2 0
ditto	52	8 11 6
ditto	47	6 6 0
Gawton	52	3 0 6
ditto	44	2 19 0
ditto	24	7 1 6
New Wheal Martha	67	1 11 6
ditto	49	1 1 6
Bedford United	56	3 18 6
ditto	51	3 16 6
Wheal Friendship	79	5 9 6
ditto	17	12 12 0
Caradon Consols	35	5 7 0
Wheal Edward	29	1 18 6
West Sharp Tor	11	5 6 0
Collacombe	8	2 19 6

TOTAL PRODUCE.

Devon Great Con.	1628	£7729 19 0	New Wh. Martha.	116	£ 158 4 0
Marke Valley	420	1452 17 0	Bedford United	107	414 17 6
Brookwood	306	1238 2 6	Wh. Friendship	96	646 14 6
East Caradon	300	1097 13 0	Caradon Consols	35	187 5 0
Okel Tor	280	816 2 0	Wheal Edward	29	55 16 6
Prince of Wales	153	1125 8 0	West Sharp Tor	11	58 6 0
Gawton	120	456 18 0	Collacombe	8	23 16

Average Standard ..... £114 8 0 | Average Produce 6⅛
Average Price per ton £4 5 6
Quantity of Ore ..... 3609 tons | Quantity of Fine Copper, 221 tons 18 cwts.
Amount of Money £15,461 19 0

LAST SALE.—Average Standard ..... £111 12 0.—Average Produce 6⅛
Standard of corresponding sale last month, £114 8 0.—Produce, 6¼.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Vivian and Sons	500 5–6	£ 961 12 3
Freeman and Co.	124	513 16 0
Grenfell and Sons	607	3256 18 0
Sims, Willyams, and Co.	354½	1413 14 3
Williams, Foster, and Co.	417½	2140 19 0
Mason and Elkington	172	837 14 0
Bankart and Sons	365	1626 0 6
Copper Miners' Company	423½	1660 17 0
Charles Lambert	468 5–6	1810 11 0
Sweetland, Tuttle, & Co.	248½	963 17 0
Penclawdd Copper Co.	128	276 0 0
Total	3609	£15,461 19 0

Copper ores for sale at Tabb's Hotel, Redruth, on Thursday next.—Mines and Parcels.—South Caradon 520—Clifford Amalgamated 400—West Damsel 257—Phœnix Mines 215—Fowey Consols 192—Great North Downs 187—Bampfylde 65—Grambler and St. Aubyn 23—Pembroke 5—Opie's Precipitate 2.—Total, 1866 tons.

WATSON AND CUELL'S MINING CIRCULAR

WATSON AND CUELL,
MINING AGENTS, STOCK AND SHARE DEALERS, &c.
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

MESSRS. WATSON AND CUELL having made arrangements for transferring their weekly Circular, which has had so large a circulation during the past ten years, to the columns of the *Mining Journal*, their special reports and remarks upon mines and mining, and the state of the share market, will in future appear in this column.

In the year 1843, when Cornish mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring success in the aggregate," and Messrs. WATSON and CUELL have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and share dealing than there is at present; and, from the lengthened experience of Messrs. WATSON and CUELL they are emboldened to offer, thus publicly, their best services to all connected with mines or the market, as they have for so many years done privately, through the medium of their own Circular.

Messrs. WATSON and CUELL transact business in the purchase and sale of mining shares, and other securities, payments of calls, receipt and transmission of dividends, obtaining information for clients, and affording advice, to the best of their knowledge and judgment, based on the experience of more than 30 years active connection with the Mining Market.

Messrs. WATSON and CUELL also inform their clients and the public that they transact business in the public funds, railway, docks, insurance, and every other description of shares dealt in on the Stock Exchange.

Messrs. WATSON and CUELL are also daily asked their opinion of particular mines, as well as to *recommend* mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

Messrs. WATSON and CUELL having agents and correspondents in all the mining districts, and an extensive connection among the largest holders of mining property, have the more confidence in tendering their advice on all matters relating to the state and prospects of mines and mining companies, and are able to supply shares in all the best mines at close market prices, free of all charge for commission.

PRIVATE CIRCULARS.—As a general rule, if anyone has acted directly contrary to the advice given in some of these productions, in nine cases out of ten he will have acted rightly; and for this simple reason, that although they attempt to disarm suspicion, like one before us, by saying the author has "not any special interest in writing up any individual mine," but is actuated, of course, by the purest philanthropy in giving unasked advice to strangers, they are, in the most part, *notoriously* sent out to puff up mines in which the writers have a personal and pecuniary interest; while real, good mines are often depreciated, either to suit the writers, who are "bears;"—for some personal spite against parties connected with them; or to get the public out of good stock, and to induce them to invest in the other rubbish they offer at a large profit to themselves. Last week, in noticing this subject, we stated the objects of some of them was not to write *truth*, and we pointed out the falsehoods given in one then under our notice, and promised to refer this week to other remarks made in it respecting Prince of Wales Mine, and its condition. The person whose name the circular bears has been systematic in his attacks, and those who have followed his advice since the shares were 5*s.* know what value to attach to it. In August last he published most damning reports. The names of the inspectors were not given, but all the bargains in the mine, put together, were said to be worth less than 10*l.* per fm., and the picture drawn of it was hopelessly bad. Again, on Sept. 5, the attack was followed up; the mine was a cheat and a delusion, so the language implied; "the shares were down to 20*s.*, and the previous supporters the greatest sellers." If anyone sold out upon such statements, what is their position now? This same circular noticed *eight mines*, seven were strongly *recommended*, and, as it said, "should be bought," while the poor Prince of Wales Mine was sent to hopeless perdition. We need hardly say, of the seven mines which were recommended in that circular *all* have gone down, while the poor persecuted one has risen 300 per cent. East Basset shares were called 26, and were to double their price, there "was every prospect of it." Cook's Kitchen shares were 7½ to 10, and there was "no doubt it would soon recover its former value of 30*l.* per share." East Chiverton shares were a great catch at 1½ to 2, and, strange to say, they are still in high favour in the Circular of April 9, though, after many calls have been paid, and the shares have been worthless, they are still recommended, but the price is modestly left out. Now, everyone is liable to err in judgment, and as no one is more willing to confess and deplore our errors than we are ourselves; we are anxious also to be charitable towards others, but we like fair-play, and to see things done openly and above board. Some of these private circulars contain statements which, if published openly in the *Mining Journal*, would as openly convict their authors, but they are sent round privately to the clients of other people, and to perfect strangers, whose addresses are obtained from lists of shareholders for the purpose—to disgust them with the stock they hold, with the agents and brokers who act for them, and to obtain by these means correspondents and clients for the special purposes of the writers. Let it be understood, however, that we do not thus stigmatise *all* mining circulars.

WEST PRINCE OF WALES.—Mr. John Hitchins and Capt. Gifford have dialled the Prince of Wales lode, and proved that it is the same as discovered in West Prince of Wales, where it is very kindly, and in the same congenial ground as Prince of Wales. This is very important for the West Prince of Wales. Mr. Hitchins adds that a 40-inch engine, which could be erected for a small sum, will work the mine for many years.

"INQUIRER."—It is quite true that the agents are instructed not to allow anyone to go underground in Prince of Wales without an order signed by the secretary, but no shareholder is ever refused an order. It is also true, we find, that Capt. Charles Thomas went to the mine on *March* 11 *without the necessary order*, and on appealing to the agents, explaining the distance he had travelled, and stating that he would write to the office to put the matter right, he was allowed to go underground; but no communication was ever received at the office from Capt. Thomas; and his report was published last Saturday, *five weeks* after it had been made. We do not believe Capt. Charles Thomas had anything to do with its publication, and the best proof that the short survey made by him was quite inadequate to enable him to judge of the value of the mine, is the progress and great improvement in it since, and we advise all who read his report last week to study Capt. Gifford's reply this week. Whatever may be the eventual fate of the Prince of Wales, no one can deny that it is one of the finest discoveries made in Cornwall for many years. It has, so far, thrown life into the district, at a time when great distress existed throughout the county, and it has been the means of turning increased attention towards mining industry, and of bringing many people into mining investments. In every way its success, therefore, is to be desired, and the publication of Capt. Thomas's report is, I am glad to find, universally condemned. Every man has a right to his opinion; but here was a report published after the opinion upon which it had been founded had been proved erroneous. The sale of ore, which we may, by the way, specially recommend to the attention of Mr. A. James, realised, with carriage, which has to be added to the ticketing prices, 1162*l.*—not far from our estimate, and the sale does not show the depreciation in quality named by C. Thomas.

WHEEL-GEARING—MECHANICAL DRAWING.—Two most useful little books, bearing respectively the titles of "The Art of Wheel-Gearing," and "The Art of Mechanical Drawing," have just been issued (through Messrs. E. and F. N. Spon, the well-known scientific publishers, of 48, Charing Cross) by Mr. J. E. PHILLIPS, of Grantham. The former book will especially recommend itself to practical men, since it is quite unnecessary that the reader should possess any acquaintance whatever with the higher branches of mathematics to enable him to secure all the advantages which it offers. The rules given are very few and simple, perfectly intelligible and reliable; and by the careful study of them the practical pattern maker of ordinary ability may learn, in the course of an hour, to set out with sufficient accuracy, and with only scale and compasses to assist him, any wheel and pinion with epicycloidal teeth that may be required. The book has the great merit of originality, and will certainly be appreciated by millwrights and machinists, as well as by engineering students. The treatise on the Art of Mechanical Drawing contains a good account of the forms and uses of the several instruments and materials used by mechanical draughtsmen, and some valuable hints, both with reference to the management of the instruments and to the shading and colourings of the drawings made.

TRANSATLANTIC TELEGRAPHY.—At a recent meeting of the Liverpool Polytechnic Society a paper, contributed by Mr. JOHN DE LA HAYE, was read on "Ocean Telegraphy," in continuation of one forwarded to the society a short time since on the same subject. He now supplied certain data which he at that time omitted. The writer was altogether opposed to the use of external wires in deep-sea cables. Their only use, he said, was to give longitudinal strength whilst the cable is being submerged, and he contended that this end could be attained by the plan he suggested, which would afford protection to the core without the extra bulk, and at a less expense. The core, ¼ inch in diameter, he proposed to cover with a closely-plaited shield of steel wire, making the cable when complete, only ½ inch in diameter, and of merely sufficient weight to allow of its sinking slowly into the depths of the sea; so that the strain would be very slight, whilst the strength of the cable would be three times greater than is requisite for any strain which might be brought to bear upon it. Mr. De la Haye said the maximum cost would be about 125*l.* per mile. The inventor has now had samples of the improved cable made, and it is undoubtedly the strongest and lightest cable yet manufactured.

MOTIVE POWER.—According to the invention of Mr. G. ZANI, it is proposed to employ a series of drums, mounted in a frame furnished with brackets for supporting the hollow axles of the weighted drums at each end thereof. A central axis (supported in bearings at each end of the frame) passes through the series of weighted drums, this axis being free to revolve in one direction, independently of the weighted drums. Ratchet teeth are cut upon the central axis, opposite one end of each of the drums, and a catch, carried by a stud on the end of each drum, falls into the ratchet teeth on the axis, and communicates motion thereto as the chain unwinds from each drum during its revolution, caused by the descent of the weight attached thereto. Upon one end of the central axis a toothed wheel is fixed, to which motion is imparted by a pinion and crank lever, by which the whole series of drums are caused to revolve, in order to wind up the whole series of cords and weights simultaneously when down. A ratchet wheel is fixed on one end of each drum, into the teeth of which a paul drops, to prevent the revolution of either or all of the drums by the descent of their weights, until the power of the descending weight of either of the drums is required to impart motion to the central axis.

LONDON GENERAL OMNIBUS COMPANY.—The traffic receipts for the week ending April 14 was 10,581*l.* 15*s.* 9*d.*

Notices to Correspondents.

*** Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be *filed* on receipt: it then forms an accumulating useful work of reference.

CHIVERTON MOOR.—I consider the letter signed "A Shareholder," in last week's Journal, so much to the purpose relative to this mine, that all interested in it can scarcely fail to do right if they would but put in practice the valuable hints thrown out, especially as I have reason to believe they emanated from one thoroughly conversant with the subject, and certainly well qualified to give an opinion. We should be unanimous, as he justly remarks, and take such steps as will ensure us against a repetition of what has taken place. Harmony can be produced by sharps and flats, but we who pay the piper must not alway be considered as the latter.—AN ADVENTURER.

GONAMENA MINE MANAGEMENT.—I beg to call attention to the abstract of accounts passed at the general meeting of Gonamena Mine adventurers, held on April 11, at Liskeard. In this abstract appears the following singular entry—"By balance from last account 2419*l.* 2*s.* 6*d.*" to the credit of the concern; and in the assets account the following item, "Calls unpaid, *bad*, 2325*l.* 11*s.* 6*d.*" Now, I ask can anything be more irregular than such a method of keeping accounts? Is not the truth, the undeniable simple truth, this—that the balance in favour of the mine from last account is the difference between the sums of 2419*l.* 2*s.* 6*d.* and 2325*l.* 11*s.* 6*d.*, or 93*l.* 11*s.*? What a playing with facts. What a useless pretentious entry is that of 2419*l.* 2*s.* 6*d.* balance in favour of the adventurers from last account. And then, in the assets account, appears calls, good, 708*l.* 3*s.* 7*d.* What is the meaning of this? How can such management be allowed by men of business who can give personal superintendence to the affairs of the mine? Outsiders some hundreds of miles away, as I am, cannot attend the meetings, and these are the accounts which are furnished to us—a fictitious display of a mythical balance in our favour, and a call of 1*s.* 6*d.* per share, though there is a sum of 708*l.* 3*s.* 7*d.* due to the mine, and called a "good" debt. If good, why is it not realised? Why should I and others be called on to pay 1*s.* 6*d.* a share to make a purse, that the non-payers, who are called "good," may be relieved from their fair share of the burdens of the mine?—A COUNTRY SHAREHOLDER.

WELDING COMPOSITION—"R. F." (Dublin).—It is stated that a good mixture for welding iron may be thus formed. With borax mix 1-16th of sal-ammoniac, and having fused the mass, pour it on an iron plate; when cold, pulverise it, and mix it with an equal weight of quicklime; sprinkle it on the iron, which is heated to redness, and replace it in the fire: it may be welded below the usual heat.

THE MINING JOURNAL,
Railway and Commercial Gazette.

LONDON, APRIL 20, 1867.

MINERAL WEALTH OF NOVA SCOTIA—GOLD MINING.

The distribution and mode of occurrence of gold in Nova Scotia differs in some important particulars from auriferous areas in any other part of the world as yet known to be gold producing in a commercial house. Drift clays and gravels are very thinly scattered over the country south and south-east of the auriferous belts, hence alluvial washings are comparatively insignificant sources of the metal in Nova Scotia. The gold occurs in veins of pure quartz, or in beds of quartz; it is frequently associated with the sulphides of iron (pyrites), and still more commonly with the arsenides of iron (mispickel, &c.) The age of the rocks in which the auriferous veins occur is Lower Silurian, a broad belt of the older part of this series, called the Quebec Group of Sir W. E. LOGAN, extending for more than 90 miles on a north-easterly course through the province, and parallel to, as well as forming part of, the Atlantic coast of Nova Scotia. Gold has also been found in a Lower Carboniferous conglomerate, and since the precious metal has recently been discovered in veins penetrating the Laurentian Rocks of Canada, the equivalent of the Fundamental Gneiss of Scotland, the limits of auriferous rocks, as well as the age of gold-bearing veins, have been immensely extended. There are twelve districts in Nova Scotia where gold mining is practically carried on. In September, 1866, there were 74 mines in operation. These yielded during the quarter ending in that month 7184 ozs. of gold, and during the year 24,162 ozs.; 27 steam-mills and 11 water-mills were employed in crushing quartz; the yield per ton of quartz amounted to 15 dwts. 14 grains; some mines giving as much as 3 ozs. 15 dwts. 18 grains to the ton of quartz on the average of a month, while as much as 87 ozs. has been obtained from a single ton. Reckoning the value of the gold at $18·50 per ton (3*l.* 14*s.* sterling) the average yield throughout the province per man, including all those actually working in and at the mines, amounted to $668·41, or 133*l.* 16*s.* This average is stated to exceed the yield of California or any other gold mining area in America. The Commissioner of Mines, in his report just laid before the Province Assembly, states that "it has been proved beyond all question that the auriferous quartz of Nova Scotia is not only richer, but that it pays the miner better, than that of any other country in the world where gold mining is now prosecuted."

In the face of such a statement it will be asked, "Why do not the Nova Scotia Mines attract more men and more capital?" A very short experience in Nova Scotia supplies the answer—bad management and bad roads. The latter difficulty does not exist during the winter season, when sleighing is practicable; the former is general, with two or three striking exceptions. Many of the mines are in the hands of Americans, who are anxious to realise profits with the smallest possible outlay of capital and expenditure of time, but when a liberal amount of capital has been judiciously expended, and the works carried on with system and economy, extraordinary profits have been reaped. The common processes employed are those of crushing the quartz by means of stampers, and passing the auriferous sand and slimes produced over amalgamated copper plates, either stationary or "shaking." In consequence of the coarseness of the slimes, much gold escapes with the tailings in its matrix of quartz; other portions float on the surface of the water passing over the plates, being buoyed by adhering particles of air; a third portion is so intimately blended with the sulphides and arsenides of iron that it escapes amalgamation, hence it happens that there are thousands of tons of tailings in Nova Scotia which still contain a considerably larger proportion of gold to the ton than was obtained from the quartz which produced them. It is within the mark to state that not more than one-third of the gold is separated from the quartz by the processes commonly employed in Nova Scotia. No attempt has hitherto been made to abstract the gold from the arsenical portions of the tailings, and when it is known that auriferous arsenical ores predominate in the gold mines of the province, it will be understood why so little progress has been made in mining the rich and extensive veins of this ore, which are distributed throughout the gold-bearing rocks. A portion only of the free gold is saved in the auriferous sulphides and arsenides, the chemically combined gold is all lost for the present, and it will remain in the tailings until some economical method is devised and practised for separating it on the spot, or concentrating the ores, and sending them to England for manipulation there. There is no insuperable difficulty in working the arsenical ores on the spot, but in Nova Scotia, where the metallurgical arts are in their infancy, and where time is so grudgingly accorded, no one has the courage to adopt the simple methods which modern science suggests for preparing the arsenical ores for amalgamation. This subject is one of the most important in the economy of gold mining in Nova Scotia, and it is a most attractive and promising field for enterprise.

With some rare exceptions the same loose and unbusiness-like system prevails in gold mining as was noticed in a former article on the coal of Nova Scotia. It is difficult to find any correct plan of the auriferous areas worked, showing the veins and their ramifications, the faults and disturbances to which they may have been subjected. In the absence of this necessary preliminary to successful mining, numerous valuable locations have been abandoned, the vein having "given out," to use the local term assigned for the suspension of operations. Anyone familiar with the nature of a true vein, in a country where dislocations are not unfrequent, will understand the disadvantages of mining without plans, surveys, and records. This want of system is a serious drawback to the successful working of many valuable properties. It is, however, an evil which will be remedied in time, but with much present loss and discouragement.

New discoveries are continually increasing the auriferous area within the limits of the province; and even in the Island of Cape Breton the drift clays show alluvial gold in greater abundance than on the mainland, and several auriferous veins have been found there which promise well.

The richest lodes in Nova Scotia proper appear to belong to the arsenical class; in these flake gold is commonly seen, not only between the crystals of mispickel, but also in the hanging wall of slate. In some localities, veins wholly composed of arsenical iron pyrites hold 1 oz. and upwards of gold to the ton, with a certain percentage of silver; in other areas the mispickel occurs in auriferous nodules from ½ inch to ½ yard in diameter. In these nodules the gold occurs in strings and flakes, as well as in chemical combination; it is the free gold only which is saved by the processes employed, hence in the hands of skilful metallurgists the arsenical lodes would acquire additional value, notwithstanding present drawbacks. No one who carefully examines the prospects of gold mining in Nova Scotia can resist the impression that this province will become in a few years one of the most important and constant auriferous areas in the world.

THE MINERAL RESOURCES OF NATAL.

It has been stated with regard to the coal and ironstone deposits of Natal, by Dr. R. J. MANN, as the representative of the Natal Government, that ironstone occurs in great abundance, and nearly throughout the colony, and that there are also large deposits of valuable bituminous coal in the basin of the Tugela, cut through by streams, and in many places lying on the actual surface; yet these deposits appear to have been hitherto entirely neglected, owing to the want of facilities for the transport of the coal. It is now proposed to open up the entire district by means of a light railway, and an English company is already projected for carrying that proposition into effect. Alluding to the movement in the Cape of Good Hope to offer a reward for the discovery of coal within a moderate distance of the port of Capetown, Dr. MANN remarks that it suggests to him the desirability once again to draw attention to the large and, in all probability, very valuable coal field already known to exist in Natal. There is in Natal *real* coal of good quality and in large quantity; it lies in a remarkable upland basin, forming a huge watershed, drawing a very large area into one natural outlet, the channel of the Tugela river. The coal occurs in seams over 6 feet thick, which alternate with beds of shale; it is richly bituminous, burns readily, makes excellent fire and cokes well. The deposit stretches more or less continuously through many miles of country. The coal is now in almost universal use amongst the blacksmiths of the colony. There are no engineering difficulties between the coal field and the sea which would prevent the speedy construction of a railway.

It is proposed to ask the Natal Government for a 5 per cent. guarantee on the money invested in making the railway, and that half a million acres of land be ceded to the railway company; also that the company have granted to them leases of the coal fields and other mineral deposits on royalties, on terms somewhat below the average of such as are now paid by the proprietors of coal and other mines in England. It must, of course, be expected that the local Government will agree to charge no royalties whatever until half the capital invested in mining has been redeemed, and the works paying not less than 10 per cent. per annum. Mr. J. ELLIS WEST, an old resident of the colony, writes that the general physical features of the colony are well known to him, and he is opinion that to meet all the requirements of the colony on the one hand, and to make a paying railway on the other, a line constructed from the terminus of the present short railway at the Queen's-bridge, Umgeni River, and following the valley of the same river up to beyond Table Mountain, thence rising the hills to the north-east of Baines Drift, continuing along the heights above York, near to where coal exists, and crossing the backbone of the colony, near the sources of the Umvoti, thence down towards Niekirks, on the Mooi River, and skirting the present high road towards Estcourt and Colenso, would be the most beneficial line of route for the main line of railway that could be undertaken. From the junction of the Umgeni and Umsundusi Rivers a light tramway might be made to P. Maritzburg, which would answer all the necessary purposes of its construction, and by this arrangement the interests of all classes now in Natal would be served, and the recommendation made on this head by the Legislature of the colony carried out.

Referring to the construction of the railway, Messrs. TINN and FRYAR, of Bristol, observe that, having fixed the route, the next consideration is the style of railway best adapted to the present and future wants of the colony. They are of opinion that such a line should be of 4-feet gauge, and with rails of about 45 lbs. to the yard. Economy in construction, combined with strength and durability, is the great secret of all paying lines, and principally to the former is due America's immense strides in civilisation and commercial wealth. Had our English lines been constructed with more regard to economy instead of expending lavish sums on stations, bridges, and works of construction generally, how very different might their financial and commercial value have been to-day. Keeping this in view, we would therefore, urge that the greatest economy be practised in works of construction, compatible with durability and safety, and suggest that all the viaducts, bridges, and banks be constructed for a single track only, the former (viaducts and bridges) need not be more than 10 ft. wide between the parapets, and should be so constructed as to be easily widened for laying down a second track at any future time if necessary. For that purpose all the bridges and culverts should be finished on the high side of the line only, leaving the abutments on the low side stepped, corresponding with the slope of the embankment, and the piers toothed. By this means wings are on one side only necessary, and when the double line is required it is easily and cheaply executed without disturbing existing work in any way. For viaducts the piers and abutments should be founded for a double track, and the masonry carried up to ground level, and above that for single line. In this way the great loss of interest upon capital sunk on dead work is avoided. They estimate the cost at 5000*l.* per mile. There appears to be an excellent field for obtaining a large carrying trade for the railway, both in the way of general merchandise and minerals.

PETROLEUM AS STEAM FUEL.

Like our own Government, America is making great exertion to perfect the use of liquid fuel for steam purposes; a race is being run as to which should have the first laurels of success. A few months since the results of the Woolwich experiments, carefully collected, were submitted to Congress, whereupon the matter was referred to the Committee on Naval Affairs, who, at the suggestion of the Secretary to the Navy, recommended that Congress should make an appropriation for the purpose of having experiments made at the New York Navy Yard, under directions of the Secretary of the Navy, to ascertain the caloric power of petroleum, as compared with anthracite coal, the experiments to be conducted under the immediate charge of Capt. B. F. ISHERWOOD, Chief of Bureau of Steam Engineering, United States Navy. Capt. ISHERWOOD has detailed the best talent of the country. All has been done that talent, science, and expense can furnish to get the best results. Nearly ten months have been absorbed, and the experiments have developed wonderful success, though new matters present themselves every week. A new series of experiments were commenced at the New York Navy Yard on April 4 last, with STEVENS'S patent, and on another patent at the Navy Yard at Boston, but at the latter place, it is said, without success.

Suggestions have been sent over here to consolidate the English and American interests—make one company, and have a distribution of shares. But the two systems, as represented by Mr. RICHARDSON and Mr. STEVENS, are so totally different that there is no amalgamating them. STEVENS'S system, or process, has gone no further, on a large scale, than giving one hour's work, and it is very doubtful if it could give more. It was tried in Oct., 1865, in a splendid marine boiler, cast by the Morgan Ironworks, New York, and an account of the experiment was forwarded to this country, and published in the MINING JOURNAL in July last, without any data as to the amount of evaporation or oil used; the experiments, together with all the elaborate calculations given as to what it would have done if it had gone on a little longer, are valueless. It was first operated upon by Prof. FISHER, of New Haven, in 1854, who thus describes it—"The petroleum is evaporated in a close box, steam is mixed with the va-

pour, and the vapour is burned as it issues from bat-wing burners." Dr. FISHER burned petroleum by this plan "several hours" under a small boiler, and measured the water evaporated. He then burned anthracite coal under the same boiler for four hours and thirty-five minutes, and measured in this case also the water evaporated. The steam was generated under a pressure of 40 lbs. to the square inch, and hence from a temperature of 268°, after making proper allowances for the heating of the water, the result was 7·81 lbs. of water at 268° converted into steam by 1 lb. of petroleum; 4·89 lbs. of water at 268° converted into steam by 1 lb. of coal—a very poor result.

It requires a wood fire in addition; for, without it, the steam-jets would be continually going out, the water vapour overpowering the petroleum vapour, which is rather sluggish. It is difficult, therefore, to see how by any series of expensive experiments STEVENS'S process could be made effectual, although correct in the principle of burning the vapour of oil and water together, the mechanical difficulties, or construction of the apparatus, preventing its use. Now, common creosote has in two separate processes in this country evaporated 18 lbs. of water to 1 lb. of the fuel, and more is expected.

A large and powerful boiler was started at Woolwich Dockyard on Wednesday and Thursday last; the best Welsh coal was used, with a first-rate result. A fortnight will be necessary to take out the coal-grates, and fit in those for the oil. Creosote, napthaline, shale oil, and Zante petroleum, probably Trinidadian petroleum and gas tar, will be used; a powerful superheater is to be made use of. The laurels of success will, it is fully expected, be borne away by the old country.

THE NORTH OF ENGLAND IRON TRADE.

The reduction in wages has now been settled in connection with all the ironworks in the North of England district, and the men are said to be keeping steadily at their work, wherever there is a chance of having anything like regular employment. Unfortunately, this district has been badly off for orders since Christmas—quite as badly off, indeed, as Staffordshire or Scotland; but the recent cheapening of the cost of production has had the effect of bringing no inconsiderable number of orders into the district. Of course, prices are low still, but it is felt to be much better to work, even without any clear margin of profit, than to let the mills and forges remain idle, because in that case the loss by depreciation of plant alone is a very heavy item. The iron trade has just recently been a good deal disorganised by the strike of enginemen and firemen connected with the Darlington section of the North-Eastern Railway. This company serves the whole of the manufacturing district of the North, as the Stockton and Darlington section is the portion which runs through the Cleveland district proper. As there are nearly 100 blast-furnaces served by this section proper, and as the furnaces of this locality draw their supplies of coke and limestone mostly from a distance, it will be readily understood that any temporary suspension of traffic must be productive of serious inconvenience to the iron trade.

On Wednesday, in last week, the drivers of the goods and mineral trains on this railway suddenly ceased work, without giving any notice whatever. On that day, and on Thursday, the entire traffic of the whole system was very much disorganised, as not only did the men cease work on the Darlington section, but many others on the main line and branches also turned out to support the cause of those who struck in the first place. The men are evidently very greatly disappointed in the results of their movement, as the directors are now almost completely independent of the men who struck, and yet the drivers on other lines quietly talk about making common cause, in order to compel the North-Eastern directors to take on the men who voluntarily, and without notice, left their work. It is to be hoped that the men in the service of other companies will think over the matter before they commit themselves to a course of action so thoroughly indefensible.

The Iron Trade of the district is generally thought to be just a shade better, especially in one or two of the manufactured iron departments. The rail mills have been fairly employed of late, with the exception of a few days last week, when they were in some cases stopped for want of coals. The orders which have come to hand of late, however, are not numerous, nor has any improvement in prices taken place. The plate manufacturers state that they are now a trifle better off for orders, consequent upon the slight stimulus which has been given to the shipbuilding trade. Prices, too, are in a few instances not so unsatisfactory as they were. Competition is very keen at present. The bar makers report that they find orders for the better brands more numerous than for common iron. The makers of the higher classes of merchant iron are doing a tolerably good trade. In the jobbing mills the orders are mostly of a miscellaneous character, and involve so much roll changing that the rollers complain of losing a great deal of time in executing the work. For cable iron there is a fair demand. The pig-iron trade continues unsatisfactory. Shipments to Belgium and France are tolerably heavy, though there has been a falling off in this department of the trade during the last fortnight. The exports to Scotland are said to be also somewhat less. In general, however, the quantity of iron shipped coastwise is quite as great as it has usually been.

There is no particular change to report in connection with the blast furnaces. Several new ones are rapidly approaching completion, but it is questionable whether they will be put in blast until a decided improvement in trade takes place. Some of the new plants will embrace all the modern improvements which have been introduced into this department of industry. The price of coke is slightly easier, though, as the demand is rather increasing than diminishing, there is no probability of any material changes taking place in the price of fuel. This is a matter which affects the manufacturers of pig-iron very materially, and, indeed, is one of no small importance to the iron trade generally.

BLOCHAIRN PUDDLED STEEL AND MALLEABLE IRONWORKS, GLASGOW.

These works occupy fully five acres of ground, on the banks of the Monkland Canal, about two miles east from Glasgow, and give employment to nearly 600 men. The varied machinery is driven by three powerful engines of a united aggregate of 500-horse power, and includes guide, merchant, and plate-mills, and cutting and hot-blast machinery. We also noticed immense castings of a "house" for a new plate mill to roll heavy iron of from 12 to 25 cwts., the heaviest at present made being only 18 cwts. by 1¼ in. thick. The initiatory refining operations to which the pig-iron is subjected to bring it into a malleable state are commenced in a cupola furnace, the heat being intensified by the aid of the hot-blast. After fusion and a short refining the liquid metal is run into a second and adjoining refinery; and, as the molten stream comes rippling along, it discharges some of its carbon in twinkling sparklets, which at night reminds one of the famed waters of that Tibetan river, called by the natives Hotunhor, or sea of stars, which sends its glittering waters sparkling to the sea. Between these two furnaces the pigs are refined for about an hour and a quarter, and after leaving the last the metal is run into large square cakes. As soon as these are sufficiently solidified they are plunged into a pool of water to cool and harden, and are afterwards broken up and sent to the puddling-furnaces to be mixed with unrefined pigs—half and half—to facilitate the work of the puddler and improve the quality of the iron. There are are 38 pudling-furnaces at work preparing iron for three powerful Condie hammers. This preparatory process is engaged in for the purpose of expelling the carbon and oxygen which is latent in cast-iron, and aiding its conversion into malleable. It leaves the puddler's furnace in a pasty state, and is shingled and parted of its scoræ under the pressure of a large Condie steam-hammer. In the same heat it is rolled out into bars of different thicknesses. When cooled this iron is cut up by saw or powerful shears, which go through iron an inch or two thick, as if it were a bit of cheese, into lengths to suit the description of work for which it is intended when in its finished state. It is now ready for the heating furnace (of which there are twelve at Blochairn), into which it is placed in layers of from 3 to 6 or 8 in. When re-heated to a state of incandescence it is brought to the mills and rolled—into plates ever lengthening and widening till they become a web of iron; into bars broadening and extending in ribbon-like amplitude; into burning angles, as acute as if they had been measured by the geometry of Euclid; into guide iron, twisting and curling like "fire-worms," as the rolls spout them out on the sandy floor. These descriptions of iron are the plates, merchant bars, tye-bars, angle, rail, and guide iron of commerce, and while hot are cut into lengths for the market. The make at Blochairn averages 1400 tons of finished iron per month, but when their large new mill is erected this average will be largely increased. Blochairn brand is one of the best in this market, and comprises three qualities—Blochairn best, best best, and extra best—and is specially adapted, from its fibry toughness, to shipbuilding and boiler-plates. The tye-bars and rails are also favourites.

Messrs. Hannay and Sons also manufacture puddled steel, of which we saw numerous specimens in rods, rails, plates, bars, &c., which had been subjected to severe tests (hot and cold), to prove their strength and power of resisting the tensility of steam. It had also been purposely fractured, to show its granulation and the silky cocoon-like fibres of which it was composed. To the Blochairn Company belongs the credit of having been the first ironworkers in Scotland who successfully manufactured and supplied puddled steel-plates for shipbuilding. They are presently perfecting this branch of their trade, and we anticipate the Messrs. Hannay will not be defeated in their object.

In leaving this establishment we have to thank Mr. Bladen, the manager, for the facilities he afforded us in inspecting it; Mr. Pool, for his intelligent interest in describing the modes of procedure; Mr. Hamilton, for his description of the machinery; and Mr. Yates, the cashier, for accompanying us through the works, and his hearty kindness at parting. It is more than poetry to say that—

> "From scenes like these
> Old Scotia's grandeur springs."

And while wishing the new proprietors, Messrs. Hannay and Sons, every success, we earnestly hope that the workmen (who, under the full pressure of the primal curse, "earn their bread in the sweat of their brow,") will not lose their reward for such exhausting toil.

GOLD IN WALES—SUCCESSFUL RESULTS.—Within a short period we have recorded the successful working of the Anglo-Brazilian, North del Rey, Vallanzasca, Val Toppa, and Pestarena Gold Mines, all comparatively young mines as regards their present operations, and all wrought with British capital. Notwithstanding the generally received belief in the uncertainty of gold mining, it may be doubted whether the proportion of successful to unsuccessful gold mines known to the English public has not been greater than has prevailed during the same time among mines of the common metals. The fixity of price for the produce relieves gold mining from the fluctuations which for a long time have pressed so heavily upon the copper, tin, and lead mines of this country, and improved processes and machinery for separating the gold from the matrix have tended to lower the cost of gold reduction, and to diminish the loss of the metal; so that, supposing the location of a gold mine to be well chosen, and the management what it should be, there is, probably, now a less average risk attendant upon mining for gold than for the ordinary metalliferous minerals. The probability of good gold mines being discovered in the British Islands has been much discussed in our colu ans. The success of the Vigra and Clogau Company in the Dolgelly district, and the large returns of gold from one of their mines, led to the establishment of many gold mining companies in the surrounding country; but there cannot be any doubt that the majority of those companies ought never to have been formed, as the localities chosen for their operations offered no reasonable probability of a successful issue. The Vigra and Clogau Mine alone maintained its ground; but after returning gold to the value of 46,000*l.*, and paying upwards of 26,000*l.* in dividends, its good fortune seemed to desert it for a time, and it became poor. The directors having placed the superintendence of the mines in the hands of Mr. Arthur Dean, the original discoverer of the Welsh gold field, that gentleman chose a new locality upon the Clogau property, and upon a parallel lode to that which had previously yielded so much gold, and commenced a new mine. We may congratulate the directors and their engineer upon the choice made, and the brilliant success attained, as the whole of the outlay upon the mine has been considerably more than repaid out of produce, which, as may be seen from the weekly reports in the Journal, has during the last eight months steadily increased, until the yield for the first 15 days of April has reached 345 ozs. of gold. The mineral appears to be astonishingly rich, as 440 lbs. of ore gave 341 ozs. of gold, or at the rate of 1735 ozs. per ton, whilst a part gave upwards of 2300 ozs. per ton. The now established discovery and successful working of two rich gold mines upon the Clogau property, certainly settles the question of gold in Wales, so far as that company is concerned, and their success will probably lead to the renewal of further attempts at gold mining by other companies; but it is to be hoped that the errors of the past will not be repeated, and we may yet see gold mining in Britain firmly established as a national industry.

COAL TRAFFIC ON FRENCH RAILWAYS.—The coal traffic of the great French systems of railways appears to be steadily extending. Thus the Orleans carried last year 1,063,500 tons of coal, as compared with 945,000 tons in 1865, and 821,000 tons in 1864. Even now, however, the coal traffic of the company is singularly small, having regard to the extent and importance of its network. The quantity of coal carried by the company to Paris is curiously limited, having been only 19,373 tons, against 13,371 tons in 1865, and 2417 tons in 1864. The Western of France Railway carried last year 499,000 tons of coal, as compared with 430,000 tons in 1865. The augmentation arose principally in English coal, in consequence of the advance which took place last year in French and Belgian coal. Thus English coal, which figured in 1865 to the extent of 63 per cent. in the total tonnage conveyed, attained last year a proportion of 67½ per cent. The port of Dieppe, which gave the company's system a coal movement in 1865 of 102,000 tons, yielded a traffic of 141,000 tons in 1866, showing an augmentation of 39,000 tons, or 38 per cent.

IMPROVED MINING PUMP.—Some improvements in pumps intended for mining purposes have been introduced by Messrs ALLISON and BANNAN, of Port Carbon, U.S., which it is claimed does away with the most serious objections to direct-acting pumps, and makes them as near as may be perfect. The inventors are making two kinds of pumps, one kind in which the slide pump is intended for small sizes and light lifts—say, not over 150 ft. in vertical height. They have had one of these pumps (8-in. pole, 14-in. steam cylinder, 3. ft stroke) running over five months on a lift of 136 ft., and it has not cost 1 ct. for repairs, and was tested lately by a party from Scranton, and run up to 60 strokes, 180 ft. travel of the piston and plunger per minute (which is an extraordinary speed), without any injurious effects to the pump. The other style of pump, is intended for heavy lifts of from 150 ft. to 350 ft. perpendicular height, and is of extraordinary strength and superior make, being fitted with what Mr. Allison calls the "cataract valve motion." In this arrangement the slide or steam-valve is moved by the pressure of the water in the column, and is at all times under the control of the engineer. The slide-valve begins its movement, when the piston is within about 12 in. of the end of the stroke, and moves with a regular motion, until the steam is exhausted from one side of the piston and let on in the other. This movement, with the peculiar construction of the slide-valve, allows the piston to come to a dead stop (for a moment) at the end of the stroke, thus giving the pump-valves time to shut by gravity, and thereby relieving the pump and valves of the terrible shock incident to all other direct action steam-pumps, without eccentric movements.

REFINING CAST-IRON.—An invention has been provisionally specified by Mr. J. LIVESEY, of Park-street, Westminster, which relates to the treatment of cast-iron in the solid state for the removal of such impurities as can be volatilised at a temperature below the melting point of the metal. The metal is placed in a suitable chamber for being heated to the required degree. The iron is isolated from contact with the fuel and its resultant gases, by placing it in a close chamber, and letting the heat circulate in flues outside its walls, as is done in cementing. When the iron has been raised to a heat not less than redness, a current of pure air heated in its passage to the chamber is admitted beneath, and allowed to escape above, so that a current is continuously passing through and among the mass of iron. When the process has been continued long enough, the charge is withdrawn, and a fresh parcel of iron is operated upon.

MOTIVE-POWER ENGINES.—An invention has been provisionally specified by Mr. R. BENNETT, of Edinburgh, which has reference to motive-power engines of the reciprocatory class, worked by the confined pressure of steam, air, water, or other fluid raised, accumulated, and conveyed all by any of the usual manners at present practised for using the same as motive-power agents for the moving a piston or pistons and cylinder or cylinders, as the case may be, which is or are connected in the usual manner by connecting rods to a crank shaft, so as to convert the reciprocatory motion into circular motion, and transmit the motion and power for general purposes in the usual manner. The essential feature of the invention consists in alternately increasing and diminishing the area of the piston and cylinder or pistons and cylinders, or acting surfaces, at the ends of their strokes (or at the time the crank is turning the two "dead" centres in a line with the axis of the moving piston or cylinder), so as to act upon and move the actuating surface, for the time being, with a proportionally greater force in the direction of motion than in the reverse direction equal to the said difference made or caused in the area of the actuating surfaces, and the pressure of steam acting thereon above that of the atmosphere, and by this means keeps the direct pressure of the steam or other fluid power employed constantly acting within the cylinder or cylinders, as the case may be, without any great or essential escape of the acting fluid or heat therefrom, as is the case in the present construction of engines, which allows an escape of the motive-power fluid at the end of every stroke equivalent to the whole cubical contents of the motive-power cylinder.

REPORT FROM NORTHUMBERLAND AND DURHAM.

APRIL 18.—The strike of the engine-drivers, firemen, and guards connected with the Great North-Eastern Railway system has produced a great sensation here. The strike occurred suddenly, and, certainly, most unexpectedly at the moment. The agitation had certainly been going on some considerable time, but mutual concessions had been made, and it was expected that all the points brought forward at the late meetings and conferences between the men and the directors had been amicably settled. However, some misunderstanding took place between the drivers and the local agent at Darlington, and the spark was soon fanned into a blaze, the result being the defection of at least two-thirds of the men on the line. Fortunately the men engaged in conducting the main passenger and other trains continued true to the directors, and the vacancies caused by the men on strike have been filled up in a manner truly marvellous, but it must be recollected that the district abounds in branch lines, and a large number of men are to be found capable of managing engines of all kinds. As it is, fully 85 per cent. of the vacancies have been filled up, and there appears to be a prospect of the whole being so shortly. A large number of men have been got from the various collieries and short lines of the district. At the commencement of the strike the coal and other mineral traffic was considerably checked, and in some cases entirely stopped; indeed, some extensive works were threatened with entire stoppage, but such a serious result has happily been averted; and although many of the collieries have been partially stopped, and also ironworks and chemical works much checked, this is gradually passing away, and a full supply of coal and other minerals will shortly be had. Some of the men have been charged before the magistrates with having left their employment without giving proper notice, but the cases have, in most instances, been postponed, and those opened at Gateshead, on Tuesday, will be proceeded with on Saturday next, when the Manchester champion, Mr. Roberts, is expected. In one instance a conviction has been recorded against a man for this offence at Leeds, but the judgment has been reserved for a month, with the hope that in the meantime an understanding will be come to between the parties. Whatever the immediate cause of the present dispute may be, and what the amount of blame to be attached to the parties concerned, the general strike appears to be not only very bad policy, but positively unjust, both to the railway proprietors and to the general public. At present it appears to be extremely likely that the bulk of the men out will not be wanted again on the North-Eastern Railway.

The prospect for the general trade of the district, although slowly improving, is certainly getting brighter, and orders for finished iron, both bars and rails, are becoming more plentiful. The iron shipbuilding trade on the Tyne is also improving, and altogether, although the movement is certainly slow, yet a revival of trade is confidently expected to take place shortly.

REPORT FROM SCOTLAND.

APRIL 17.—Our ironmasters are slowly, and it would almost appear reluctantly, lighting up an occasional additional furnace, still there are now about 105 in blast, or an addition of from eight to ten since the beginning of the month. There is nothing in the consumption or demand to justify this step; and it must be regarded more in the light of an endeavour to find work for their miners than anything else. There has been rather a tendency in the Pig-Iron market to greater firmness, and prices have again advanced 3d. per ton—the Luxemburg question notwithstanding. The returns from the various ports show good shipments for the week just ended, there being 15,560 tons, against only 10,570 tons in the corresponding week of last year, and 10,000 tons of the former amount was sent foreign. To-day the market was scarcely so vigorous, and the business done was at 52s. cash down; 53s. 30 days, closing rather buyers at 52s. cash. Gartsherrie, No. 1, 65s.; Coltness, 64s.; Glengarnock, 61s.; g.m.b., No. 1, 52s. 9d.; No. 3, 51s. 9d. The demand for Finished Iron has not greatly improved since our last, few works working more than from half to three-quarter time, and the men are getting dispirited. We understand that the workers in the Glasgow Iron Company's large work, at Motherwell, have had notice of a reduction of from 5 to 10 per cent., the unremunerative price of malleable iron being ascribed as the cause. If the workmen acquiesce in the reduction it is expected a spur will be given to this branch of trade, and full time will be the reward. If they determine otherwise it will only be to add to their present poverty. The tin-plate works at Coatbridge, which have recently been extended, are full of orders. The price of all kinds of finished iron remains unchanged. The Woodneuk Ironworks, at Garteash, were sold last week for 4250*l.*, but the name of the purchaser has not yet transpired. Ironfounders, with one or two exceptions, are not busy, but we are happy to state that the contract for 8000 tons of water-pipes for Melbourne would have been all taken here by three firms, but want of freight necessitated 2000 tons being sent somewhere else, and we believe that portion has gone to Middlesbro'. The 45,000 tons of pig-iron (to be sold under the authority of the Court of Session) are to be disposed of in lots of 500 tons, on Tuesday next, at the auction mart here; the brands are various. The trade in Coals for shipment is brisk at the reduction, the Ayrshire coalmasters having more than an average share of orders. From all the Scotch ports, for the week ended yesterday, 24,940 tons were shipped, while last year only 13,920 tons were shipped in the corresponding week. At a meeting of colliers, held at Motherwell, to devise means for resisting the reduction of wages, a Mr. Cowie was of opinion that "a strike of the 45,000 miners in Scotland was the only thing needed to ease the market, and let the masters see they were half in earnest." Mr. M'Donald did not see his way to that. Where would his pay come from if *all* the colliers were on strike? He thought they should try the Clyde, and one sale work; and to this the miners all shouted hurrah! Poor fellows, they are easily gulled.

An explosion of fire-damp occurred in one of Messrs. Merry and Cuninghame's coal pits, at Haughhead, near Hamilton, by which three men lost their lives—James Bryce, underground manager, John Kay, and James Campbell. It appears that the two former were engaged in removing a stopping which had been made in the soft coal face about three weeks ago; when an escape of gas took place, resulting in an explosion, which caused the death of the whole party. On the accident becoming known, the manager, Mr. Nish, with half-a-dozen volunteers, went down the shaft to make a search, only to return, however, with the dead bodies of the three unfortunate men. Surgical aid was promptly secured, but found of no avail in the circumstances.

In shipbuilding our prospects are getting rather brighter, and we are glad to learn that the Messrs. Derry Brothers have contracted to build two screw steamers, each of 1500 tons, for the Austrian Lloyds, the engines being supply by Messrs. Derry and Co., engineers, Dumbarton. Other smaller craft have also been booked during this week. The launches this week on the Clyde comprise the largest composite ship that has yet been built. This ship, which was named the Leicester by Mrs. Roe (the lady of the commander), is 220 ft. long, keel and forerake, by 37 ft. breadth of beam, by 22 ft. depth of hold, and measures 1440 tons (builders' measure). The Leicester is the first ship built on Lloyd's new rules for composite ships, which give immensely greater strength than the old rules; it is owned by the Merchant Shipping Company of London.

A new steam-boiler has just been finished by Mr. Wilson, of the Lilybank Boiler Works, for the St. Leonard's Works, Netherton. The boiler is 28 ft. long and 7 ft. in diameter, and has two internal fire-boxes, each 3 feet in diameter; it has also every improvement for a stationary land boiler. Its chief peculiarity is that no angle iron is used in the front end—all its corners where angle iron is generally used having rounded and flanged plates instead, thus admitting such large diameter of fire-boxes within a 7-ft. shell, greatly increasing the heating surface, and consequently adding largely to the steaming and economical properties of the boiler. The fire-doors have regulating air-valves for lessening smoke, and are very simply and neatly arranged. The boiler is being fitted up and mounted by the same firm, and the chief peculiarity by way of improvement in the mounting is that none of them are jointed or bolted to the boiler, as is usually done, but are attached to metal beds or stools, having planed surfaces, and these metal plates are rivetted to the boiler. This method makes tight joints, and enables any leakage between stools and mountings to be made tight, without the usual necessity of being obliged to blow off the boiler for this purpose. The man-hole of the boiler has a strong metal bed rivetted to it, which has also the above advantage of being kept tight, besides strengthening this weak part of the boiler. The workmanship is excellent, and it has a high style of finish

throughout. When tested at Lilybank Works, in the presence of Mr. Houston, manager of E. Beveridge and Co.'s St. Leonard's Works, it stood the severe hydraulic pressure of 90 lbs. to the square inch in a most satisfactory manner.

REPORT FROM MONMOUTH AND SOUTH WALES.

APRIL 18.—The tendency to improvement which has manifested itself in the Iron Trade since the commencement of the new quarter is fully sustained, and it must be admitted prospects are brightening, although rather slowly. As yet it is all expectation as to what the new quarter will bring forth; and while on one side confident hopes are expected of returning activity, on the other hand doubts are entertained as to whether anticipations will be realised, and threatened political and other complications are pointed to as indicative that the course of industry may be disturbed before long. Provided peace, however, is maintained, all are agreed that there cannot be a doubt of a considerable degree of improvement in the trade, and to no district will this be more welcome than South Wales, where makers, for the last 18 months, have been put to serious trials to keep their hands employed, and prevent their vast establishments from being stopped. It was hinted last week that fresh contracts for railway iron were looked forward to, and there is no doubt that the greater portion of them will be secured for this district, as Welsh makers are generally successful in competing for rail specifications, and there is no reason to apprehend that they will be less fortunate in this respect for the future than in the past. From the foreign markets a good many enquiries have been received, and there is every probability of additional business in a few weeks' time. For pigs there is a slightly better demand. Tin-Plates maintain their position, and business is tolerably good. At all the works of the district the men are fairly employed. In the Coal Trade business has been again checked, owing to the unfavourable weather, and trading operations at the various docks have been dull during the past six or seven days. Steam coal proprietors are not complaining quite as much as they did a few weeks ago of the want of activity in the demand, and indications are not wanting that foreign buyers are beginning to enter the market with more freedom. About the usual quantity is sent to Birkenhead for shipment. Coasting business in house coal continues tolerably good. For Coke there is a limited enquiry, and stocks keep rather heavy. At the Cymmer and other collieries, the men who turned out against the reduction have submitted, and gone in at the reduced rate.

The Dunraven United Collieries Company first ordinary general meeting was held at Cardiff, on Saturday, Viscount Malden in the chair. The directors' report was a very favourable one, and it is evident that the shareholders are possessed of highly valuable properties. The New Brithdir Collieries are returning good profits. Blaenclydach has been much improved, and at Dunraven the Four-foot vein has been reached, and the colliery is gradually getting into profitable working. A dividend of 10 per cent., free of income tax, has been paid for the past year, and after payment of the same there is a balance of 327*l.* to carry forward. Nothing could be more satisfactory than this, and no little credit is due to Mr. Thomas Joseph, the managing director, and the officials under him, for the very able and careful manner in which they have looked after the affairs of the company. A good proof of the soundness of the undertaking, is the fact that a large number of the shares are held by local parties. A full report of the meeting will be found in another column.

Mr. Robert Lonie, colliery viewer, now of New Tredegar, and late of Aberdare, was presented on Monday evening with a handsome photograph likeness of himself, by the members of the Prince of Wales lodge of True Ivorites, Aberdare. The presentation was made at the Cardiff Castle Hotel, Aberdare, the Rev. Dr. Price in the chair. High encomiums were passed on Mr. Lonie's character, and his ever ready disposition to assist those who were placed under him; and the rev. Chairman remarked that, although unacquainted with the language in which the business of the lodge was conducted, Mr. Lonie had only been absent on three lodge nights in three years. The rev. Chairman further stated that the testimonial was a proof that Welshmen were not backward in appreciating dignity and true worth, whatever their source of nationality.

Nixon's Navagation Coal has met with another triumph in certain trials of the armour-plated screw frigate Prince Alfred over the measured mile course in Stoke's Bay, near Portsmouth. When Nixon's coal was used there was an increase in the indicated power of the engines, and also in the speed, which were solely attributed to the superior evaporative power of the coal used. The coal, it appears, was wrought solely from the celebrated Aberdare upper 4-ft. seam, which proves so well at the Navigation Colliery.

The general committee of the Risca Widows and Orphans Fund annual meeting has just been held at Newport, Mr. Gratrex in the chair. The report of the relief committee showed that 358*l.* 13s. had been expended during the year 1866, leaving a balance to the credit of the fund of 2781*l.* 8s. 11d., which is invested with the West of England Bank at 4 per cent. interest. On Jan. 1, 1866 the fund amounted to 3025*l.* 0s. 11d., and deducting from this the balance to credit on Dec. 31 last, the actual increase in the fund during the year was 243*l.* 12s. The weekly payments decreased during the year from 6*l.* 18s. 6d. to 6*l.* 9s. 6d., and the number of recipients of the fund from 65 to 50. The committee adopt the plan of giving dowries to the widows who marry: the result has been that out of 51 widows on the fund six years ago only 15 now remain. The total expended since the calamity to the close of 1866 amounted to 4774*l.* 8s.

A dispute having arisen at the Coedcae Colliery respecting the employment of an engine-driver, eight colliers were brought before the Pontypridd magistrates, on the charge of leaving their work without notice. Mr. Williams, the manager of the pit, proved the engagement, and he stated that an engineman, named Rees Jones, was discharged by him for intemperance. He engaged another competent engine-driver, but the colliers objected to him, although they could not substantiate one of the objections they had against him. The new man did not happen to be a Unionist, and, no doubt, this was the real cause of the opposition to him. Evidence was given showing that the new engine-driver was thoroughly competent, and steady in his habits, whereas the discharged Rees Jones was frequently drunk on duty, and on several occasions while in this state had stopped the cage half-way up the pit full of colliers. The magistrates advised a settlement of all disputes, but as this could not be effected, they ordered the wages due to the defendants to be forfeited, and they were also adjudged to pay the costs. Here is another instance of the mischievous tendency of "Unions."

Messrs. W. H. Williams and Co. offered for sale, on Wednesday, at the Cameron Arms Hotel, Swansea, the works, plant, &c., of Shackleford, Ford, and Co., whose failure was recently referred to in the *Mining Journal*. The spelter-works were sold for 10,250*l.*, the purchaser being Mr. Wethered, colliery proprietor, &c., Bristol. Lot 2, ores, metals, and minerals, were stated in the inventory to be valued at 2463*l.* These were bought by the vendors at 15s. in 1*l.* Lots 3, 4, and 6 were not sold, in consequence of certain legal proceedings. Lot 5, ore and metal on the premises, was reserved.

TESTIMONIAL TO JOSIAH RICHARDS, ESQ.—It has been generally remarked that if great practical skill and knowledge, coupled with constant and assiduous care and attention, are necessary to constitute a good manager of an ironworks, then Mr. JOSIAH RICHARDS was one of the right description; and, as manager of the Pontypool Works of the Ebbw Vale Company, this gentleman's policy and prudence had become so far appreciated by the agents, contractors, and workmen generally, that they were determined to present him with some substantial mark of their respect and esteem on its becoming known that he was about to relinquish the duties pertaining to the said management. In furtherance of this object a committee was formed, and subscriptions were generally and generously entered into, and after several preliminary meetings a final one was held at the house of Mr. Edward Beecham, the Montague Hotel, on the evening of Thursday last, at which it was determined to make the presentation in a very quiet and unostentatious manner. A deputation, consisting of the principal agents at the Pontymoile Works, having been selected, it proceeded, in company with Mr. W. G. Golding, silvermith of this town, on the evening of Friday, the following day, to Abersychan House, the seat of Mr. Richards, to whom the members were introduced by Mr. THOMAS HOWELLS, who, in introducing the deputation, observed that the present occasion was one of a pleasing, and still of a melancholy character, inasmuch as they were pleased to perform the duty that had been assigned them, and yet they were sorry that Mr. Richards was about to retire from the management of the works at Pontymoile, which he had conducted with satisfaction to all parties, in proof of which the workmen, agents, and people connected therewith could not allow him to leave without presenting him with some substantial mark of their regard and esteem.

Mr. WILLIAMS, cashier at Pontymoile, next read an address, of which the following is a copy:—

"To Josiah Richards, Esq., manager of the Pontypool Ironworks.

"Respected and Dear Sir,—We, the agents and workmen employed at the Pontypool Iron and Tin-Plate Works, cannot suffer your connection as manager of the same to determine without assuring you how painfully we regret the severance. Few persons, perhaps, are more competent to appreciate the skill and ability of a manager than those who have been under his guidance and directions, and we most gladly declare our admiration of your practical knowledge, of your aptitude for the control and management of large bodies of men, and of your uniform impartiality and kindness to all people with whom you came in contact. But gratifying as it is to us to place on record these sentiments, we claim the privilege of evidencing our feelings in a more substantial manner than the mere expression of words, and it is with no ordinary pleasure that we ask your acceptance of the accompanying four silver desert-stands as a lasting memento of the esteem and respect we bear you. Regarded as works of art of the highest order, we trust these stands (emblematical of the seasons) are not unworthy indications of our feelings, and that as often as they may appear upon your table they will awaken in your mind agreeable recollections of your association with us. There is one feature in this testimonial so unusual in its nature, and so very complimentary to you, that we desire especially to refer to it, which is that the lessors of the Pontypool works have marked their approval of it by giving a most liberal contribution towards it; nor should we, in justice to others, omit to mention that several people, unassociated with our works, have claimed to join generously in a movement which met with their cordial approbation. In bidding you farewell, we desire to express our sincere hope that a bright future is before you, and that Mrs. Richards may long be spared to invest your home with that happiness and comfort which she is so eminently calculated to win and secure. On behalf of the agents, workmen, and others, we have the honour to be, respected and dear sir, your faithful and most obedient servants, Thomas Howells, Joseph Green, John Price, H. J. Parkhurst, William Williams, R. G. Jones, R. E. James, Jno. Williams, Morgan Jones, David Jones, John Rus, Thomas Davies, Robt. Counsell, and Wm. Thomas, members of the testimonial committee."

Mr. RICHARDS, in reply to the preceding eloquent and touching address, said—"I find it very difficult to express to you how gratefully I appreciate your kind and generous conduct in presenting me, on behalf of yourselves and other individuals with whom you are associated, with this address, and the valuable and costly pieces of plate which are now before me. I can assure you, gentlemen, I shall never forget the pleasing and endearing manner in which my name is mentioned in the address, in connection with that of Mrs. Richards, and also in respect to Pontypool. This very handsome testimonial will, I hope, be handed down to posterity, and be the means of convincing those people who may come after me how necessary it is to gain the approbation of all parties with whom you may be brought in contact, by a honest and dutiful line of action, in order that all may work in peace and harmony together. My management at Pontypool has been a laborious one, more particularly from my having also the management of the extensive works at Abersychan; and I may here remark that, were it not for the hearty co-operation of both agents and workmen, I very much question whether I could possibly have carried it on during the last three winters; but it is astonishing what may be done by one and all labouring with a hearty goodwill together, for the attainment of one good object, in which the interests of masters and men are the same and identical. As more particularly regards my own part, I can assure you it is gratifying to me to find that my humble services have not only been appreciated by the agents and workmen, but also by other individuals who are interested in the prosperity and welfare of Pontypool and its neighbourhood; and I have only to add that I most sincerely thank you and the subscribers generally for the honour you have done me this evening."

Mr. Richards's acknowledgment of the kindness of the subscribers towards him was delivered in a very feeling manner, and received with marks of approbation. The deputation having been invited to partake of wine, long life, health, and prosperity were invoked for Mr. and Mrs. Richards, and Mrs. Heymore; and other complimentary toasts having been given, the proceedings terminated. The pieces of plate, which had been supplied by Mr. W. G. Golding, to whom we have already referred, were of the value of about 160*l.*, and were much admired, not only for their intrinsic value, but from the chaste and elegant manner in which the ornamental parts had been executed, as well as the more massive and substantial descriptions thereof.

It may be added, in conclusion, that never was a testimonial more worthily bestowed or more richly deserved than the one referred to, seeing that Mr. Richards has been most incessant and untiring in his exertions to push on the Pontypool Ironworks with vigour and energy, which, owing to many hidden and intricate circumstances, has been a task of no ordinary magnitude.

FOREST OF DEAN.—The already reported improvement in trade generally is still characterised with vitality, and this week it has been imbued with "new blood." The principal collieries have plenty of orders to execute, and there is little fear of any reactionary movement taking place with regard to this commodity for some weeks to come at least. At the smaller collieries in the Forest, where the local trade is done, there is still a good demand, and "reduction," which generally takes place with the advance of spring, is still in embryo. This demand upon the coal market is daily becoming greater, being in proportion to the rapidly increasing population of the district. Since the introduction of locomotive power to carry away the mineral, there has been evinced a desire in the Forest to take advantage of so great a boon, and hence increasing prosperity has followed. That there is efficient railway communication here with other lines cannot as yet be asserted, for, indeed, the Monmouth and Hereford side is, as it were, entirely shut out, and if the contemplated lines are made, it will require considerable time before they are brought into proper working. The side of the Forest to which we allude can hardly boast of a tramway, and yet much valuable mining property lies buried beneath the surface. The Forest of Dean may truly be said to be young in advancement with the times, though mature in worked treasure; but like the opening bud, just now so manifold, it daily gives brighter promises of an abundant yield. There is no abatement in the demand for iron. The Forest furnaces were never brisker, neither was ever better iron sent to market. The prices, if not at their highest, are still remunerative, as is evinced by the alacrity manifested by the masters to make as much as possible. In regard to the tin trade, the present quarter, so far as advanced, augurs hope for the Midsummer return. The prices are easier than reported a few weeks previous. Notices have appeared in reference to certain alterations of Crown rents, royalties, or tonnage duties now payable by the undermentioned coal and iron mines. The custom in the Forest of Dean is, at the purchase of a gale from the Crown, to hold the same for a term of 21 years. If not developed the dead rent only is paid, but if worked a fixed royalty, varying from 1d. to 4d. per ton, is levied by the Crown. Notice has been given by Mr. James Kenneth Howard, Her Majesty's Commissioner of Woods and Forests, that upon the expiration of such cesser he will proceed to fix the amount of the new galeage rents, royalties, and tonnage duties to be paid for the next 21 years, according to the provision of the Act in reference thereto. The following are those referred to:—The Champion Colliery, the Extension, the Unity, and the Nag's Head. The mines are—Old Park Iron Mine, Scar Pit, Easter, Slope Pit, Yew Tree, Bromley, and Drybrook.

Some extensive sand mills for stone, known as the Western Steam Saw Mills, Parkend, are in the market, and will be offered for sale towards the latter part of this month. The property belongs to a Mr. Hall. It is a stone works, and several very extensive stone quarries will at the same time be offered for sale. This is really worth the attention of the capitalist.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

APRIL 18.—There is no change to report in the state of the Iron Trade this week. There is, no doubt, rather more doing than there was a month ago, but there is still great room for improvement. Mr. Hartley, as a member of the Commission appointed to enquire into the supply of coal, is distributing forms for returns, with a view to obtain the facts as to South Staffordshire and Shropshire, which he has undertaken to collect. A very important and somewhat exciting case under the Mines Inspection Act has been decided during the week by Mr. Isaac Spooner, the stipendiary magistrate of the South Staffordshire district. The case arose out of an accident which happened as far back as July 12 last year, at the Bromford Colliery of Mr. W. H. Dawes, an extensive proprietor of coal mines and of ironworks. Two boys and a young man were at work in what was called the Near Pit, and were seen about noon. They did not return home in the evening, and a search was instituted for them in the mine, which for some time was without success. The workings in the measure in the Near Pit communicated with those in the Far Pit, which is higher, and at length the search was directed to an old disused gate-road, in the latter part of the mine. It was found to be full of carbonic acid gas, and for three or four hours what is called a "blowgorge" was employed to drive air into the road, and thus divest it of the poisonous element with which it was charged. In this gate-road the dead bodies of the three were at last found. They had no business there, nor, indeed, in that pit at all, though it seems that sometimes, when they wanted to make up the number of men to fill the skip in ascending, persons did go from one pit to the other, instead of ascending the shaft from their own proper level. At the inquest it was generally admitted that the old gate-road was regarded as a dangerous place, from its being liable to contain gas, and though this was disputed before the magistrate, and it was stated that the accumulation of gas was caused by an unknown fall closing the current of air just before the accident, yet as this was not the important point, and the magistrate decided that it was a place "suspected to contain dangerous gas," this question need not be further alluded to here. Mr. Baker, the Government Inspector of Mines, laid an information against Mr. James Cope, as the agent of the colliery, under the second general rule of the Mines Inspection Act, for having neglected to fence off the entrance to this place, as one "not in actual course of working and extension, and suspected to contain dangerous gas." The hearing of the case has from various causes been deferred, in one instance from failure on the part of a summoning officer, and, as was stated for Mr. Baker, mainly from the difficulty almost always experienced in such cases of obtaining evidence to show who was the agent under the terms of the statute. During the interval the case has been a good deal discussed, and has, it is understood, excited no small degree of interest amongst the the members of the recently-formed Mine Agents' Association of South Staffordshire, whose secretary, Mr. H. Johnson, and many of the directors, were present at the hearing at West Bromwich, on Monday. Mr. Thomas Walker, solicitor, of Wolverhampton, supported the information, and Mr. Mottram, of the Oxford Circuit, instructed by Messrs. Duignan, Lewis, and Lewis, was for the defence.

Limiting this notice of the case to the question whether the defendant was the person liable under the Act for the fencing of all dangerous places not in work, it will be sufficient to state that Mr. Walker observed, in introducing the case, that the Act made the agent and owner answerable for the neglect of this provision, and that its general spirit appeared to be to make the owner and agent liable for everything appertaining to ventilation. The agent was defined in the statute as "the person having, on behalf of the owner, the care and direction of the mine." To prove that Mr. Cope, the defendant, occupied that position, he called Mr. Dawes, the owner of the mine, and asked him what Mr. Cope was, and what were his duties. Mr. Dawes was evidently anything but a willing witness. He said Mr. Cope was his "consulting" mine agent, and that his duties were to advise as to laying out the workings, and generally to superintend and to give advice when any question arose, or when there was any difficulty. He said that the person who was regularly down the pit was his sub-agent, Callear. After a good deal of examination and cross-examination, Mr. Spooner, the magistrate, handed the section of the Act of Parliament to the witness, referring him to the passage which defines the agent, as stated above, and observing, "I am sure you will answer me in a moment," said, "Who is the person in this instance?" to which Mr. Dawes replied, "Callear."

Mr. Walker then called Callear, who was also a reserved witness. He said he was the underground bailiff, who received directions from Mr. Cope, and who looked to see that the butties carried on the work properly. He, too, was examined at considerable length. Mr. Spooner, however, asked him whether he had any other master besides Mr. Dawes, the proprietor, and, on his saying that he had, asked who it was, to which he replied, "Mr. Cope."

Mr. Motheram, in an able speech, contended that Mr. Cope was not the person liable under the statute. He was one of a most respectable and most important class of persons, who were not devoted solely to the mines of a single proprietor, but who had the general oversight, it might be, of the mines of 20 or 30 different owners, and he asked how they could be made answerable for such matters as to the neglect of which was alleged in this case. He said that if it were held that they were so responsible, such a decision would destroy the important profession, and would do great harm by relieving of responsibility those who were the proper persons to take precautions from being regularly on the spot, and seeing the necessity for such provisions. Mr. Spooner took time to decide, and on Wednesday, at Wolverhampton, delivered a careful judgement, in which he said:

"After a careful consideration of the evidence, I have come to the conclusion that the defendant was the agent of the colliery, he being the person having (in the words of the statute) 'on behalf of the owner, the care and direction thereof.' I think Callear was only the ground bailiff of the pit, with the duties and responsibilities attached thereto; and that having been engaged, and acting as ground bailiff, he would have had a complete answer if he had been charged, as agent, with an offence against the Act, by showing what his employment was. * * * I, therefore, find that the defendant was the agent of the colliery within the meaning of the 23d and 24th Vict., cap. 151, and that he neglected properly to fence off, so as to prevent access thereto, the entrance to a place in the said colliery not in actual course of working and extension, and suspected to contain dangerous gas, and that he knew the place was suspected. Considering, therefore, the absolute necessity that the rules prescribed by the Act of Parliament for the safety of the workmen in the mines should be rigidly observed, I think it my duty to impose the penalty of 20*l.* and costs."

It was understood that as that decision is essentially based on facts, no proceedings can be taken to set it aside.

It may be added that Mr. Hooper, coroner, who had presided at the inquest in the case of the death of the persons whose lives were lost by this accident, was present as a witness in the above case. On the following day he held an inquest in the case of a man killed by a fall at another of Mr. Dawes's collieries, and he observed that he was sorry to find from what had happened within the last 24 hours that many of the persons in Mr. Dawes's employment deposed very differently at his inquest from what they did at other tribunals; and he wished it to be known that in all such cases for the future he meant to prosecute for perjury.

The case referred to, which called for all this sharp observation, was one in which William Sheldon was killed at the Hides Pit Colliery of Mr. Dawes's on Saturday last. He and a man named Whitehouse were at work when there was a fall of what was called "gob," that is material put in to fill up the excavations in the mine. It struck the deceased on the head, and, though he was promptly rescued, he died before he could reach the surface. Whitehouse said that there had been no examination of the pit that morning before work commenced; that he went down and lighted a naked candle at once, and he also said that he had called the doggy's attention to the dangerous state of the "gob," and that he, after trying to dislodge it, said they must watch it. Two butties and a doggy, however, swore positively that the mine was examined before work was commenced that morning. The coroner and the jury expressed their doubts as to this contradictory evidence, but saw no other course to pursue than to return a verdict of "Accidental Death," the coroner, however, stating that great recklessness had been shown, which was, he was satisfied, contrary to the wishes of Mr. Dawes, with whom he would communicate on the subject.

A boy working at the Sedgley Park Colliery, who was engaged with another lad as lookers-on at the bottom of the shaft, grasped the hook of the skip as it was ascending, and was drawn nearly to the top; and when the banksman, who saw him, was nearly able to grasp him, he fell, and received injuries which proved fatal.

A miner working near Bilston came up the shaft during Saturday night last for some fire, which he fetched from a house upon a shovel. He walked towards the shaft with the fire, and it is supposed that the light dazzled his eyes, as he walked straight into the shaft and was killed. The self-acting fence would prevent such accidents as these.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

APRIL 18.—The Iron Trade of Derbyshire is gradually improving, and the prospects of those connected with it are becoming brighter. The Sheepbridge Company have now got three furnaces in blast, and although there are no very large orders on hand, still there is sufficient to give employment to more hands than have hitherto been required. At the Denby Works, also, there is more doing, both at the forge and the collieries in connection with them. The new colliery, belonging to the Devonshire Silkstone Company, is being pushed rapidly forward, and at present they are drawing out about 150 tons per day, which will be increased in the course of twelve or eighteen months to 500 tons, as it is expected by that time the whole of the work will be completed. The Staveley Works are kept fully going, and the company are tolerably well supplied with orders, pipes for water and gas being in fair request. The collieries of the same firm are also well employed, and Mr. Markham, the indefatigable managing partner, having reduced the working, matters are now settling down to their old state, so that all the bitterness of the late strike is fast disappearing, and mutual confidence is surely taking the place of mutual distrust. The firm, in addition to the large quantity of coal required for their own vast works, exported a good deal to the Midland district last month, as well as some 5550 tons to London. The Clay Cross district has been kept fully going, the quantity sent from there to the metropolis alone for the month of March was no less than 27,846 tons, or nearly one-tenth of all the coal sent there by railway. The returns show that the quantity sent from the North by rail was 283,059 tons, against 284,967 tons for February, a closeness in every way remarkable. Singularly enough, too, there has been a great falling off in the tonnage carried by the Great Eastern, whilst the London and North-Western and the Great Northern have approached each other closer than they have ever yet done. The figures are as follows, with regard to the quantity of coal carried by rail into London for the last two months:—Great Eastern, February, 59,611 tons; ditto, March, 27,308 tons. London and North-Western, February, 99,337 tons; ditto, March, 101,857 tons. Great Northern, February, 81,165 tons; ditto, March, 101,737 tons. Between the two lines there is only a difference of 120 tons, a circumstance unparalleled in the history of the coal trade, in the carriage of which the two companies are the great rivals.

The Sheffield trades continue in about the same state as when last noticed, the only branches at all brisk being those connected with the heavy steel and locomotive departments. The business doing in files is moderately brisk, but by no means so much so as is usual at this season, the quietness in the shipbuilding trade affecting this important branch of local manufacture to a considerable extent.

The ironworks in South Yorkshire are far from being busy; and although at some of them full work is the rule, at several others such is very far from being the case. At Milton there is a fair business being done in bars, hoops, and sheets, principally for Russia, the ports of which are expected to be open in the course of the next fortnight, as vessels are advertised to sail thence on and after the 22d inst. At the adjoining works at Elsecar, however, matters are in a very different state, and the furnaces are now only kept going half-time, and that principally for the purpose of affording the men sufficient employment to live, as the firm have a very large stock of puddled bars on hand. Advantage has been taken of this state of things to make considerable alterations, and two of the old blast-furnaces are being pulled down to make room for new ones of a better description, in which the ordinary mason work at the bottom will be dispensed with. During the week a commission for 8000 tons of rails for America has been sent into the district, but to whose lot it will ultimately fall is as yet unknown, the general opinion favouring the Messrs. Dawes, who are in a position to execute the order better than almost any other firm, as they have peculiar advantages not possessed by, probably, any other firm in the kingdom. The steel works are kept fully going, there being no diminution in the orders for rails, as well as for tyres, axles, cranks, &c. The same may be said with regard to the ironworks on the Trent, where business continues brisk, and where the Frodingham Company have now two blast-furnaces in blast, and a third in course of construction.

The Coal Trade of Yorkshire is comparatively great to what it has been. There is, however, a moderate business being done to London and the South in the best qualities of house coal, and the returns for the last month are stated to be very favourable indeed, the quantity of Silkstone house coal forwarded to the metropolis for March being upwards of 20,255 tons, of which Newton and Co. sent 4855 tons, Cooper and Co. 4277 tons, Wharncliffe 4918 tons, and Clarke 3520 tons. The tonnage of the Barnsley seam has also been large, Lund Hill alone sending nearly 3800 tons, Elsecar 2600 tons, Wombwell Main 1400 tons, &c. As yet there has not been a very large demand for steam coal, so that several of the collieries have been obliged to stack, and others, owing to the shortness of wagons, have been obliged to set down for a day or two in the week. The opening of the Baltic ports, however, will give no inconsiderable impetus to the hard coal trade, and accumulated stocks will soon be taken off. So far our coalmasters have been singularly fortunate in not being required to stack house coal, for which they are indebted to a winter of much longer duration and severity than usual.

During the past week Mr. Southern, the newly-appointed Government Inspector, has been visiting several of the largest collieries in South Yorkshire. On Tuesday he went down the Lund Hill Colliery, and it is expected that his visits will result in some important alterations and suggestions for the more safely working of those extensive collieries, which are known to make a good deal of gas. At the Oaks there is little or no alteration in the state of the shafts. The pipe down the No. 2 at times alters its action, and becomes a downcast, but the quantity of air drawn down is very trifling. The gas continues to come up, varying from 700 cubic feet per minute to 200 feet, changing with the barometer. Close to the

pit a quantity of wood for props and sleepers has been stacked, so that the moment the engineers are of opinion that it will be safe to open the shafts the work can be carried out promptly and efficiently. On Tuesday last Mr. Woodhouse, accompanied by Mr. Diamond and the colliery staff, inspected the locality of the Aldam Junction, for the purpose of fixing on a site for the new shaft; but no place has as yet been determined upon, as they are engaged in boring, for the purpose of avoiding a very large "throw" known to exist in the neighbourhood.

The great importance attached to the many inventions introduced to the public for the purpose of consuming smoke in furnaces, boilers, &c., led a considerable number of gentlemen during the past week to visit the works of the Bolton Steel and Iron Company, for the purpose of inspecting Mr. E. B. Wilson's patent furnaces, which are an improvement on those put up at the Milton Works. Having paid considerable attention to the subject, your correspondent spent the greater part of a day in watching their progress, and from observations made he considers this invention most invaluable. The patent furnace was put to work alongside of one of the ordinary furnaces, and the fuel and hematite weighed out to each. The flame in the patent furnace was strong, steady, and continuous, and the heats were got out in fully as short a time, if not shorter than by the ordinary ones, whilst the iron was evidently of a superior quality. The combustion of the smoke—a most important item—was perfect. One of the puddlers gave it as his opinion that small coal was better adapted for the furnaces than the large pieces, as being put in at the top it gravitates towards the burning fuel much easier. Before leaving the works the manager favoured me with the quality of material used by each furnace in a given number of heats, as follows:—Old furnace, coal 2087 pounds, hematite 558 ponnds, patent furnace coal 1488 pounds, hematite 390 pounds. It will thus be seen that a very great saving of fuel and hematite is effected by Mr. Wilson's patent, whilst its smoke-consuming qualities are all that can be desired. As the patent can be applied to the ordinary furnaces at a comparatively small cost, the invention is worthy of the consideration of our ironmasters, who would do well to pay a visit to the Bolton Works, and judges for themselves. To those who were present on the occasion of my visit it seemed to afford the greatest satisfaction.

THE COLLIERY ACCIDENT NEAR SHEFFIELD.—The enquiry into the cause of the colliery accident at Brightside, by which five men lost their lives, was concluded on Wednesday by Mr. Webster, coroner. Mr. Southern, Inspector of Mines for the district, was present, and Mr. Barrett, solicitor, of Wakefield, appeared on behalf of the South Yorkshire Miners' Association; and Mr. T. Smith, solicitor, of Sheffield, on behalf of the colliery proprietors. The evidence was very contradictory. In reference to the conduct of the engineman no blame was attached, but the jury were unanimously of opinion that the accident arose from the defective construction of the wire rope. Twelve of the 36 wires composing this rope were shown to have been spliced almost at the same place, and as the strength of a rope is no more than that of the weakest part, the rope, being deprived of one-third of its power, gave way. A verdict of "Accidental death" was returned. The jury desired that the matter might be brought under the notice of the makers of the rope, John Shaw and Sons, Sheffield, and Mr. Smith promised that this should be done.

COLLIERY EXPLOSION NEAR DEWSBURY.—A violent explosion of gas took place in Messrs. Greaves and Co.'s coal pit, at Chickenley. It appears all the men had gone down as usual, and one of them (Broadhead), accompanied by his hurrier, Robinson, went into a "hole" to get coal. The two latter took with them a lighted candle, and an explosion was the result. They were both frightfully burned, and it is feared Robinson will not recover. The rest of the colliers, hearing the explosion, rushed as far away from the place of danger as they could, but returned to the aid of the injured as soon as it was safe to do so. All the miners were brought out of the mine with the least possible delay, and two or three days must elapse before the mischief caused by the explosion can be repaired. It is said that during the previous night a large stone had fallen upon some of the bratticing, and that this interfered with the ventilation.

THE ROYAL COMMISSION ON TRADES UNIONS.

THIRD DAY.

Present—Sir W. ERLE in the chair; Lord ELCHO, M.P., Sir E. W. HEAD, Sir D. GOOCH, M.P., Mr. MERIVALE, Mr. BOOTH, Mr. ROEBUCK, M.P., Mr. HUGHES, M.P., Mr. HARRISON, and Mr. MATHEWS.

Mr. ALLAN, on being further examined, put in the bye-laws read to candidates for admission, as follows:—"Any member taking work by the piece, and not sharing equally any surplus made over and above the weekly wages paid to members working on such job, shall be summoned before his branch, or committee of his branch, and if he do not comply with the above regulations he shall be fined, in the first instance, 10s.; second, 20s.; and in the third instance be excluded." We will suppose that there are a number of men engaged on a job, one of whom is receiving 30s., another 32s., and another 36s. They get a locomotive (say) to construct, and they get 50*l.* for it. Each man draws his wages from the office; but there will be a surplus, in addition to the ordinary wages. Now, we insist on that surplus-money being shared amongst all the men employed on the engine, in the same proportion as his wages and the time that he makes. Some piece-masters wish to pocket the whole of the surplus, but we insist on their sharing it.

Mr. MATTHEWS: If a workman possessed of superior intelligence or tact in organising a contract divided the proceeds among his fellow-men, there is no encouragement for him to proceed in that way, is there?—Such a man as that, generally speaking, is rated at a higher rate of wages than the others, and, in addition to his rate of wages or the sharing the surplus, he generally receives something like 5 or 10 per cent. for his management in the affair. Sub-contracting, the letting out of a job by one workmen to another, would be opposed by the society altogether.——It is at the option of his fellow-workmen whether they will give him that 10 per cent.?—Decidedly so. It is a question of gratuity.

Mr. ROEBUCK: Supposing that a man works under his fellows—that is to say, under price, and that he is a member of the society; and supposing that a man of his capacity usually gets 30s., and that he, under certain circumstances, is willing to take 20s., what will the society do in that case?—We would say to that man, "You must leave this shop." We will suppose a shop to be a 36s. shop—that is, 36s. a-week. If a member goes and works there for 32s., and is not worth any more than that, we say to him—"Your better plan will be to leave this shop, and go to one where you can only get that; but do not stay there for the purpose of giving encouragement to the employer to reduce the rate to 32s."——But supposing he were to go into another shop after he had been excluded from the first, what would be the effect of that?—The effect would be simply this: that if he could not command what we call the proper rate of wages, he must be in consequence of his not being a competent workman, and, therefore, he could not remain a member?——Supposing that non-society men are working at a lower rate of wages in the same shop, do you take objection to that?—Certainly not; they can work for what they like.

By Mr. HUGHES.—These bye-laws are printed; but they are not with the other rules, on the ground that we had no notion of letting the public know as to the existence of such rules as those, or letting non-society men know. Another prime bye-law is as follows:—"Any member who is in receipt of benefit, and gives reference to a person not belonging to the society to ask for or accept a situation, shall be suspended from benefit for three months. If any of our members get a job, or use their influence in getting one, for any person not belonging to this society, without the consent of the secretary and president, to be fined not less than 5s." "Receipt of benefit" means out-of-work money; so that if he recommends a man not belonging to the society while he is out of work himself he is liable to be suspended for three months.

Mr. MATTHEWS: Supposing his brother came to him, would he be prohibited from recommending him?—Decidedly; and it is quite proper, I should say, that he should.

Mr. ROEBUCK: It appears that some of the disputes have arisen from the employment of boys. Could boys do the work of the men?—They might be capable of doing a portion of it.——And did the masters think they could?—I have no doubt they did, or else they would not have employed them.——Why should you prevent a master from employing boys who can do the work?—We have a perfect right to say to him, "If you employ a certain number of boys beyond what we conceive to be a proper number, we will not work for you."——A proper number means the number that you like?—What the men think right.

Mr. BOOTH: What is your object in limiting the number of apprentices?—To keep up the wages up; no question about it.

Mr. MATTHEWS: So that, while keen competition is brought to bear on the operations of masters in every department of trade, the workmen contrive by various means to shut out the competition of labour?—No; I think it generally regulates itself.——But would not the effect of the Unions be to interfere with that self-regulation?—Decidedly so; we do interfere as regards the society men.

Mr. ROEBUCK: You have said that a great number of the strikes have arisen from resistance to a lowering of wages. Have you asked for an increase on account of the price of provisions having risen?—Yes.——Did the masters ever propose a reduction on the ground that provisions were cheaper?—No; they assign as a reason badness of trade, and say, "When trade was good we have given you an advance of wages, and when trade is bad you ought to submit to a reduction."——But that position of the masters has been resisted?—It has been resisted, and is being resisted now at Blackburn. They propose there to reduce wages 2*s.* per week, and the men are all on strike in consequence of refusing.——At Blackburn has there ever been a rise of wages in consequence of a brisker state of trade?—Yes.——And the men, being pleased with that, have not yielded to the design of the masters to lower the wages when the trade is slack?—Precisely so.——So that you have one rule for yourselves, and another for your masters?—We keep what we can get, as a general rule.

In reply to questions, principally put by Sir D. GOOCH, the witness said it would be to the interest of the society to let foreign competition in, but it must be known first that orders were actually going away. In Belgium they were reducing the wages 10 per cent., in order to compete with the English in the iron trade, while, at the same time, the English were reducing wages 10 per cent. in order to compete with the Belgians. With respect to locomotives being made in France for English railways, the witness thought it would be better to keep down the rate of wages by sending men to France than to have the wages reduced to the French level. The work must be done either here or there, and men were going over there every day. They were going because they got better wages there. He had been informed, but did not vouch for the correctness of it, that not only were the tires of the engines bought in France by the Great Eastern Company completed in England, but the cranks, and wheels, and axles as well; and since that transaction the same company had accepted tenders for 20 engines at Manchester, and 20 at Glasgow. If they were supplied so well in the first instance from France, why in the name of goodness were they coming back to England?

Sir D. GOOCH: It might be, might it not, that the English contractors are getting these engines without profit, in order to keep the contracts from going to France?—I can scarcely understand an employer manufacturing 20 engines at less than a remunerative price.——It may be an advantage, I suppose, and an advantage in point of fact, for one of these large establishments to be kept going, even without a shilling profit; the manufacturer would rather keep his men going than let them stand?—That is not a rule, I think, with Manchester or Scotchmen.——Do you not think that work has been done at Manchester now in the engineering branch without any profit?—I can scarcely conceive such a contract as that taken being done without profit.

Mr. MATTHEWS: Would it not be better for large manufacturers, such as those he alludes to, to take work occasionally without a profit, rather than to let their works stand?—We have no objection to the employers taking a contract without profit; but what we say is, if you do, you ought not to make us pay for it.

Sir D. GOOCH: But the interest of the employer and the employed is to work together, is it not?—There I differ. Every day of the week I hear that the interests are identical. I scarcely see how that can be while we are in a state of society which recognises the principle of buying in the cheapest and selling in the dearest market. It is their interest to get the labour done at as low a rate as they possibly can, and it is ours to get as high a rate of wages as possible, and you can never reconcile those two things.

The witness stated, in reply to Mr. HARRISON, that the introduction of French locomotives into England did not follow, but preceded, a rise of wages here. He attributed the fact of those engines coming here to nothing more important than the influence of Mr. Sinclair, who had been some time in France. English engineers in France got from 2*l.* to 2*l.* 10*s.* per week, against 36*s.* per week at home. The French workmen got from 4 to 6 frs. per day—5 frs. would be 4*s.* 2*d.*, against some 6*s.* here. He could not say what would eventually turn up, but at present he saw nothing to apprehend. He believed an Englishman could do as much work in six days as a Frenchman could do in eight, and this he attributed to the system; men there, for instance, being allowed to smoke cigars while at work. He expected France and Belgium to progress, because it was in the nature of things that they should; but he could not say positively that greater progress would necessarily be made where wages were lower than where they were higher.

Lord ELCHO: You said that you resisted reduction of wages on the principle of endeavouring to retain what you had gained; but do you in giving advice on these matters take into account questions of competition as to how far it is possible for employers to compete with each other if certain wages are given?—We know nothing, in fact, of the circumstances of the employers' competition, and, therefore, could not deal with it; but, as a rule, if one employer ran into competition with another, we should decidedly object to allow the employer who had reduced the price of the article to reduce wages to meet it. When an employer represents that a reduction is proposed in consequence of a falling off in the demand, the society has the means of ascertaining the truth of the statement. I should not like exactly to explain in detail to the Commissioners by what mode we get that information, because it would injure some person or other; but we generally get all this information from officials in connection with the establishments in question.——The witness went into a variety of details to show the completeness of the organisation of the society, by which a complete oversight was kept of the trade. It even went so far that the books of all the branches were kept in one form issued by the general office. They have an equalisation of funds every twelve months, so that it matters not what branch pays away money, for when that equalisation has taken place one branch is as rich as another.

Mr. RICHARD HARNOTT, the secretary to the Friendly Society of Operative Masons, in reply to questions by the CHAIRMAN, said—It was established in 1833, and has now 278 branches, and 17,762 members. The trade fund and sick fund are kept distinct. A member of the trade fund pays only 4*d.* per week, and is entitled to support when out of work, with a certain sum for funerals; and those of the sick fund 3½*d.* per week additional, for which he gets 10*s.* a-week when sick. The income for the year ending Nov. 29, 1866, amounted to 17,746*l.* 4*s.* 11½*d.* At that date the reserve fund in hand was 12,334*l.* The 7½*d.* a-week has during the last 20 years been found sufficient for all purposes. The trade department is constituted to protect the members from all encroachments by employers, as well as to maintain the rate of wages. If in any lodges the members wish to benefit themselves they apply to the General Control Committee. If the application is granted, the employers receive three or six months' notice, in order that they may finish the contracts they have in hand, and make new ones consistently with the proposed increase of wages, or for a reduction in the hours of labour, as the case may be. Such a proposal is not decided by the committee, but it is submitted to every branch, and an answer received back. If there be a majority an application is made to the employers, and if they reply in the negative the men suspend work. The society does not recognise piecework. The limitation of apprentices is left to each branch; a reasonable number, according to the number of journeymen, is allowed. We have a rule against overtime, but it is permitted in cases of emergency.

Mr. ROEBUCK: Supposing I am building a house within the area of your dominions, and employ a number of apprentices, would you interfere?—As a rule I suppose we should, because it would diminish the labour of the journeymen.——Did you ever hear of a rule in the building trade that the men should be regulated in the mode of their work?—No.——There is in your rules, at page 31, a rule that a man shall not work too fast—"chasing," it is there called?—It is considered that by doing so he puts himself to inconvenience and distress.

Mr. MATTHEWS: That is to say that rule provides that the fastest workman shall be reduced to the rate of the slowest?—Not at all; we judge of the regular rate—not by what he can do, but what he ought to do.——The witness then gave an account of a strike at Newcastle, which commenced on the 1st of last May, to reduce the labour to nine hours a-day. The masters offered to raise the wages from 27*s.* to 30*s.* The 3*s.* was more than an equivalent, as the hours to be reduced were practically but five. The men refused, and the strike lasted nine months. At last a meeting was held of masters and men, and a ballot was taken, at which, out of 422, 401 voted for nine hours, and 21 for the 30*s.* a-week. The masters then gave way. In other towns the nine hours' rule has now been adopted. We prefer it to the increased wages, because it employs more hands.

PARIS EXHIBITION, 1867.—In order that all useful mechanical novelties connected with mining and metallurgy, or with the sciences allied thereto, may be fully described in the *Mining Journal*, the Editor has made arrangements to send a special representative to Paris, to make the necessary examination of the machinery, apparatus, &c., exhibited. To facilitate such examination, it is most desirable that exhibitors should supply, as soon as convenient, mechanical descriptions of their inventions, &c., which will be regarded as confidential communications until the articles referred to have been examined. Communications may be forwarded either direct to the Office, 26, Fleet-street, London, or to the care of Messrs. Vimeux, Stouff, and Co., Bankers, 3, Rue Daval (Beaumarchais), Paris.

TO BE LET, with immediate possession, the LLANELLY PATENT FUEL WORKS, situate at MACHYNIS, and adjoining the Llanelly Railway and Dock.
Apply to JAMES HALL, Esq., Guildhall, Swansea. 89

THE EDINBURGH REVIEW, No. CCLVI., for APRIL, was published on TUESDAY last.
CONTENTS:
I. COUNT BEUGNOT'S MEMOIRS.
II. ARCHÆOLOGY OF NORTH AMERICA.
III. THE PRUSSIAN CAMPAIGN OF 1866.
IV. PASTEUR ON SPONTANEOUS GENERATION.
V. LIFE AND WORKS OF HANS HOLBEIN.
VI. RITUALISM.
VII. THE REIGN OF LOUIS XV.
VIII. CORRESPONDENCE OF WILLIAM IV. WITH EARL GREY. 90
IX. FATAL ACCIDENTS IN COAL MINES.
X. TODD ON PARLIAMENTARY GOVERNMENT.
London: LONGMANS and Co.—Edinburgh: A. and C. BLACK.

NEW AND GREATLY IMPROVED EDITION.
On May 4, in 3 vols., medium 8vo., with about 2000 woodcuts, price £4 14*s.* 6*d.* cloth, or £5 12*s.* half bound in Russia,
URE'S DICTIONARY OF ARTS, MANUFACTURES, AND MINES, containing a Clear Exposition of their Principles and Practice. Sixth edition, chiefly rewritten and greatly enlarged.
Edited by ROBERT HUNT, F.R.S., Keeper of Mining Records; Assisted by numerous Contributors eminent in Science and familiar with Manufactures. 91
London: LONGMANS, GREEN, and Co., Paternoster-row.

Now ready, price Ninepence,
A LECTURE,
ON THE PAST AND PRESENT OF THE IRON TRADE,
By THOMAS ROPER.
Printed and published in AID OF THE FUNDS FOR THE SUFFERERS by the COLLIERY ACCIDENTS at the OAKS COLLIERY and at TALKE-ON-THE-HILL, at the *Advertiser* office, Ulverston, and to be had of all booksellers. 94

THE OAKS COLLIERY.—At the recent meetings at Barnsley and Normanton of the Mining Engineers, to whom has been entrusted the work connected with the opening of the Oaks Colliery, and the recovery of the bodies, a strong desire was expressed that a record of all the proceedings connected with the catastrophe, including the inquest, should be published in a more enduring form than has yet been issued. In compliance with that oft-expressed desire, it is proposed to ISSUE a BOOK in large 8vo., giving a FULL and ACCURATE HISTORY of the EXPLOSION from the most authentic and reliable sources, a map of the colliery workings, the report of the inquest, together with much interesting original matter relating to the colliery, the volunteers, and victims. The price will be One Shilling. 95
The work will be thoroughly revised by a member of the Mining Engineers' Committee, who has taken a deep interest in all that relates to the sad catastrophe, and who is thoroughly acquainted with the workings of the colliery, and will be edited by Mr. JAMES RUGLEN, who has long been a recognised authority in all matters relating to the coal trade of South Yorkshire.
Application for copies to be addressed to Mr. GEO. MOXON, printer, Barnsley.

Just published, with illustrations,
THE ART OF MECHANICAL DRAWING:
Sent post free for 42 stamps. Also,
THE ART OF WHEEL GEARING: 94
Sent post free for 36 stamps.
By J. E. PHILLIPS, Grantham, Lincolnshire.

Just published.
UNITED STATES BONDS AND SECURITIES: WHAT THEY ARE, THEIR COST, AND THE INTEREST THEY PAY. With illustrations of the Exchange of Sterling into American Currency, and *vice versa*; and many other items, which may be of interest to those desirous of information concerning American Finances and Exchange.
Gratis, on application, with stamped address. BELDING, KEITH, and Co., American bankers and merchants, 80, Lombard-street, London, E.C.

Plates, 8vo., cloth, price 10*s.* 6*d.*, by post 11*s.*,
THE MINERS' MANUAL OF ARITHMETIC AND SURVEYING.
By WILLIAM RICKARD,
Truro: Heard and Son.—London: Longman and Co.; the office of the MINING JOURNAL, 26, Fleet-street of the author, and of all booksellers. 96

NICHOLLS, MATHEWS, AND CO., ENGINEERS, BEDFORD IRONWORKS, TAVISTOCK.
MANUFACTURERS of STEAM ENGINES of EVERY DESCRIPTION, made on the BEST and NEWEST PRINCIPLES. We beg more especially to call the attention of the public to the MANUFACTURE of our BOILERS, which have been tested by most of our leading engineers. PUMP WORK CASTINGS of EVERY DESCRIPTION, both of brass and iron. HAMMERED IRON and HEAVY SHAFTS of ANY SIZE. CHAINS made of the best iron, and warranted. MINERS' TOOLS and RAILWAY WORK of EVERY DESCRIPTION.
ALL ORDERS FOR ABROAD RECEIVE their BEST ATTENTION.
NICHOLLS, MATHEWS, and Co. have had 20 years' experience in supplying machinery to foreign mines, and selecting experienced workmen to erect the same, where required. 97
Messrs. NICHOLLS, MATHEWS, and Co. have always a LARGE STOCK of SECOND-HAND MINE MATERIALS in stock, and at moderate prices.

TO FOREIGN MINE COMPANIES.
NICHOLLS, MATHEWS, AND CO., BEDFORD IRONWORKS, TAVISTOCK, beg to advise FOREIGN MINING COMPANIES that they MANUFACTURE TOOLS from a particular class of CAST STEEL, which have been tried in all parts of the world, and found to give universal satisfaction, as the many testimonials of their superior quality will prove, which effects a considerable saving not only on the old principle of using iron with steel faces, but also with regard to the number of smiths necessary to keep them in order.
We have FOR SALE a 40-in. CYLINDER PUMPING ENGINE, 9 ft. stroke in cylinder and 8 ft. in pump; and a WATER-WHEEL 25 ft. diameter and 3 ft. breast, iron axle, saddles, rings, and brasses all complete. 98
The foregoing are in excellent condition, having worked only a short time since erected new.

PATENT FLEXIBLE TUBING, AND BRACTICE CLOTH FOR MINES,
MANUFACTURED BY
ELLIS LEVER,
PATENTEE,
WEST GORTON WORKS, MANCHESTER. 99

TO COLLIERY PROPRIETORS.
BEST CHARCOAL IRON AND STEEL WIRE ROPES,
Also HEMP ROPES, for MINING PURPOSES.
ELLIS LEVER,
WEST GORTON WORKS, MANCHESTER. 100

SANDYS, VIVIAN, AND CO.,
COPPER HOUSE FOUNDRY, HAYLE, CORNWALL,
ENGINEERS, IRON AND BRASS FOUNDERS,
MANUFACTURERS of PUMPING ENGINES for WATER-WORKS, MINING MACHINERY, MATERIALS, and TOOLS of every description. 101
Foreign mines supplied on the best terms, and at the shortest notice. Second-hand Mining Machinery and Pitwork in Stock; also a new 4 and a 2-horse power high-pressure vertical engines, with boilers, and a second-hand 19-inch whim engine, condensing.

WILLIAMS'S PERRAN FOUNDRY COMPANY,
PERRANARWORTHAL, CORNWALL.
MANUFACTURERS of STEAM PUMPING and EVERY OTHER KIND of ENGINES, together with BOILERS, PUMP CASTINGS, and MINING TOOLS of every description, of the very best quality. Estimates given for the supply of any amount of machinery. 102
London Agent.—Mr. EDWARD COOKE, 76, Old Broad-street, London, E.C.

RAILWAY CARRIAGE COMPANY (LIMITED)
ESTABLISHED 1847.
OLDBURY WORKS, NEAR BIRMINGHAM.
MANUFACTURERS of RAILWAY CARRIAGES and WAGONS, and EVERY DESCRIPTION of IRONWORK.
Passenger carriages and wagons built, either for cash or for payment over a period of years. 103
RAILWAY WAGONS FOR HIRE.
CHIEF OFFICES,—OLDBURY WORKS, NEAR BIRMINGHAM.
LONDON OFFICES,—6, STOREY'S GATE, GREAT GEORGE STREET, WESTMINSTER.

THE BEVERLEY IRON AND WAGON COMPANY (LIMITED).
MANUFACTURERS of RAILWAY CARRIAGES and WAGONS, WROUGHT and CAST IRON CARRIAGE and WAGON WHEELS, AXLES, HAMMERED USES, and HEAVY SMITHS' WORK for ENGINEERS, &c. BRASS and IRON FOUNDERS. MAKERS of PORTABLE FARM RAILWAYS, TURN-TABLES, CROSSINGS, SWITCHES, &c. AGRICULTURAL MACHINISTS. MANUFACTURERS of FIELD, ROAD, and BARN IMPLEMENTS, PATENT LORRY, CART, and CARRIAGE WHEELS, with WOOD or IRON NAVES. REAPING MACHINES, CLOD CRUSHERS, CORN MILLS, &c. SAW MILL PROPRIETORS. GENERAL TIMBER CONVERTERS for home and foreign RAILWAYS, STATIONS, BARRACKS, EXHIBITIONS, &c. 104
IRONWORKS BEVERLEY, YORKSHIRE.
JAMES DEWHIRST, Sec.

THE BIRMINGHAM WAGON COMPANY (LIMITED)
MANUFACTURE RAILWAY WAGONS of EVERY DESCRIPTION, for HIRE and SALE, by immediate or deferred payments. They have also wagons for hire capable of carrying 6, 8, and 10 tons, part of which are constructed specially for shipping purposes. Wagons in working order maintained by contract. 105
EDMUND FOWLER, Sec.
WAGON WORKS,—SMETHWICK, BIRMINGHAM.
*** Loans received on Debenture; particulars on application.
London Agent—Mr. E. B. SAVILE, 67, Victoria-street, Westminster, S.W.

STAFFORDSHIRE WHEEL AND AXLE COMPANY (LIMITED),
MANUFACTURERS of RAILWAY CARRIAGE, WAGON, and CONTRACTORS' WHEELS and AXLES, and other IRONWORK, used in the CONSTRUCTION of RAILWAY ROLLING STOCK. 106
OFFICES AND WORKS,
HEATH STREET SOUTH, SPRING HILL, BIRMINGHAM.

BOWLING IRON COMPANY,
BRADFORD, YORKSHIRE.
BEST CRUCIBLE CAST-STEEL TYRES, AXLES, CRANK AXLES, BOILER PLATES,
Also COG WHEELS, and other CASTINGS.
This company is prepared to furnish the above-mentioned articles in CAST STEEL of a very superior quality, made principally from their own well-known 107
"BOWLING IRON."
Also BOWLING WROUGHT-IRON SOLID WELDLESS TYRES, of any size and to any section.

THE SEACOMBE FORGE RIVET AND BOLT COMPANY,
MANUFACTURERS OF
BOLTS RIVETS, WASHERS, COACH SCREWS, SPIKES, SET PINS, TIE RODS, COTTER PINS, &c.;
ALSO,
ENGINEERS' AND SHIPBUILDERS' FORGINGS, SMITHS' WORK, and every description of SHIPS' FASTENINGS. 108
WORKS,—SEACOMBE, NEAR BIRKENHEAD.

THE CORNWALL BLASTING POWDER COMPANY,
ST. ALLEN GUNPOWDER MILLS, TRURO,
MANUFACTURERS OF PATENT BLASTING POWDER, ORDINARY GUNPOWDER, AND WATERPROOF SAFETY BLASTING CARTRIDGES.
THE CORNWALL BLASTING POWDER COMPANY SOLICIT PARTICULAR ATTENTION to their PATENT BLASTING POWDER, which has now been fully tested by time, and the growing estimation in which it is held by working men proves its great superiority over ordinary gunpowder.
It possesses the following advantages:—
Its WEIGHT being about TWENTY-FIVE PER CENT. LESS than ORDINARY GUNPOWDER, and EQUAL in STRENGTH, bulk for bulk, an IMPORTANT SAVING is EFFECTED on the score of CONSUMPTION. 109
It creates, on explosion, only about ONE-HALF as much SMOKE as ORDINARY GUNPOWDER, and this smoke being of a lighter nature soon passes away, and an IMPORTANT SAVING is thus EFFECTED on the score of TIME.
It is ADAPTED to ANY CLIMATE, DOES NOT BECOME WASTEFUL by EXPOSURE to the ATMOSPHERE, is NOT MORE DANGEROUS in use than ORDINARY GUNPOWDER.
Testimonials forwarded on application.

COAL CUTTING MACHINERY.—The WEST ARDSLEY COMPANY having, by recently patented improvements, perfected their coal cutting machinery, worked by compressed air, are NOW READY to MAKE CONTRACTS for the CONSTRUCTION and USE of their MACHINES. 110
The results of twelve months' experience in the working of these machines, by the West Ardsley Company, have proved most satisfactory, their use being found to CHEAPEN the COST and IMPROVE the average SIZE of the COAL, to LIGHTEN the LABOUR, and also to MODIFY the SANITARY CONDITION of the MINE.
All communications to be made to Messrs. FIRTH, DONNISTHORPE, and BOWER, No. 8, Britannia-street, Leeds.

NOTICE.—The WEST ARDSLEY COMPANY, having reason to believe that their patents are being infringed upon, hereby give notice that they will TAKE LEGAL PROCEEDINGS AGAINST ALL PARTIES who may MAKE FOR SALE, or USE ANY MACHINERY in the construction of which any such INFRINGEMENT is MADE. 111

TO COLLIERY AND IRONWORKS PROPRIETORS,
PATENTEES, and ADVERTISERS of every class, who wish to address themselves to the COLLIERY, IRONWORKS, MINERAL PROPRIETORS, SHIPOWNERS, &c., of SOUTH WALES, should advertise in the "CARDIFF AND MERTHYR GUARDIAN," established in 1832, and which is the leading journal in South Wales. A series of advertisements inserted on liberal terms.
Address, G. W. JONES, General Manager, *Cardiff and Merthyr Guardian* office, St. John-street, Cardiff.

THE NEW NANTYMWYN MINING EXTENSION COMPANY (LIMITED).

Incorporated under the Companies Act, 1862, whereby the liability of each shareholder is limited to the amount of his shares.

Capital £50,000, in 50,000 shares of £1 each; 5s. deposit on application, and 5s. per share on allotment.

No call will be made for six months, and it is probable from the prospects, with the assistance of the ore money, that no further capital will be required.

DIRECTORS.

Capt. WM. A. RUMBELOW PEARSE, R.N., St. Peter's-square, Hammersmith, and Senior United Service Club, Pall Mall.

Major R. E. F. CRAUFURD, late Royal Artillery, 27, Oakley-square, Brompton, London.

FRANCIS WILLIAM STONE, Esq., late H.E.I.C.S., 15, Royal Avenue-terrace, Chelsea, and 6, Prospect-place, Hastings.

HENRY O'MALLEY, Esq., Barrister, 23, Sidney-street, Brompton, and Kilboyne House, Mayo, Ireland.

CHRISTOPHER RIGBYE A'HMUTY, Esq., 137, Cambridge-street, South Belgravia, London.

HENRY CLINTON COOPER, Esq., 78, Gloucester-street, South Belgravia, London.

FRANCIS JOSEPH SLOCOMBE LESTER, Esq., Wellington-road, Gravesend, Kent, and Goodwood-road, New Southsea, Hants

(With power to add).

BANKERS—The North and South Wales Bank, Welshpool; and Messrs. Jones and Co.'s, Bank, Llandovery, South Wales.

AUDITOR—George Atkins, Esq., Sydney Villa, Richmond, Surrey.

BROKERS—Messes. Barrett and Co., 20, Spring-gardens, Charing-cross, and 78, Lombard-street, London.

MANAGER AT THE MINES—Capt. R. Rowse, Mining Engineer.

SECRETARY—William Henry Harden, Esq.

REGISTERED OFFICES.

No. 5, BATAVIA BUILDINGS, HACKINS' HEY, LIVERPOOL.

ABRIDGED PROSPECTUS.

The object of the company is to acquire three valuable mining properties in Carmarthenshire—that is to say, New Nantymwyn, Gilfach, and Glan-Towy.

New Nantymwyn is a continuation westward of the celebrated Nantymwyn Mines. These mines have been worked to immense profit for centuries, and appear to be perfectly inexhaustible. Some idea may be formed of the great value of these lodes from the fact that they occupy a channel of 180 ft. in width, consisting of six divisions or lodes, and that a sink on one of them is now yielding 18 tons of rich quality ore, worth upwards of £200 per fathom for lead.

2.—The Gilfach property consists of a lead mine, worked to some extent, and furnished with water machinery, in which a discovery of lead ore has been made by an adit. It is proposed by the company to extend the shaft downwards on this course of ore, as well as to explore another discovery of ore in the sett on the Lady Eliza No. 2 lode, where there is a good back of ore ground cropping up to, and extending a considerable length along, the surface.

3.—Glan-Towy is an old lead mine. Shafts, which have yielded lead ore in some quantity, exist on the top of the hill, and the present company propose to drive an adit to prove the value of the lode under the old sinks.

Plans taken from the Ordnance Survey, showing the exact position of the lodes, together with ground plans of the estate sections of the mines, and reports by skilful mining engineers, are appended, and will be forwarded on application to the secretary. Specimens of the ore may be seen at the company's offices.

Taking into consideration the position of the mines, the highly favourable prospects, and the return of ore being immediately available, the directors feel confident that, with the outlay proposed, profits equal to the adjoining mines will be participated in by the shareholders.

Applications for shares, to be accompanied with the deposit of 5s. per share, may be made to the secretary, at the offices of the company, or to the bankers.

FORM OF APPLICATION FOR SHARES.

To the Directors of the New Nantymwyn Mining Extension Company (Limited).

GENTLEMEN,—Having paid to your bankers the sum of £ , being a deposit of 5s. per share on shares of the above company, I hereby request that you will allot me that number, and I agree to accept such shares, or any less number you may allot to me; and I agree to sign the Articles of Association of the company when required, and I authorise you to place my name on the register of shareholders for the shares allotted to me.

Usual signature.....
Name in full .....
Residence.....
Date..... Profession .....

BRITISH, COLONIAL, AND FOREIGN PATENTS, REGISTRATION OF DESIGNS, COPYRIGHTS, TECHNICAL TRANSLATIONS, DRAWINGS, &c.

MR. MICHAEL HENRY,

Memb. Soc. Arts, Assoc. Soc. Engineers, Author of the "Inventors' Almanac," and the "Defence of the Present Patent Law."

PATENT REGISTRATION AND COPYRIGHT AGENT AND ADVISER.

Inventors advised in relation to Patents and Inventive and Industrial Matters. Printed information sent free by post. Specifications drawn and revised. Searches conducted. Abstracts, Cases, and Opinions drawn.

Translations of Catalogues, Trade Notices, and Circulars for the approaching Paris Exhibition. Mr. HENRY has had especial experience in technical French, and in French Manufacturing and Commercial Matters.

Offices, 68, Fleet-street, E.C., London, corner of and entrance in Whitefriars-street.

BRITISH AND FOREIGN INVESTMENT.—MR. THOMAS SPARGO, STOCK AND SHAREDEALER, 224 and 225, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C., TRANSACTS EVERY DESCRIPTION of BUSINESS in the PURCHASE and SALE of SHARES in BANKS, CANALS, MINES, RAILWAYS, BRIDGES, INSURANCES, and ALL OTHER DESCRIPTIONS of BRITISH and FOREIGN STOCK.

Mr. SPARGO has 20 years' experience of mining, ten of which he was engaged in practical mining, and ten years he has transacted business in mining shares and stock, at 224 and 225, Gresham House, Old Broad-street, City, E.C.

Bankers: Consolidated Bank, and Metropolitan and Bank (Limited).

GUIDE TO INVESTORS.—Mr. SPARGO'S "Guide to Investors" for the present month contains Leading Articles on Railway Investments, the Revenue, Monetary Affairs, &c.; a Tabular Statement of Banking, Mining, and other Companies; City and Commercial Facts and Incidents; and a Price List of Shares in Banks, Canals, Railways, Bridges, and Finance Companies. It also contains Rate of Discount at Home and Abroad; together with necessary detailed information connected with the Stock and Share Markets, Mines, and Miscellaneous Companies. The City Article affords the most recent and authentic information concerning the stock, share, and produce markets.

224 and 225, Gresham House, Old Broad-street, London, E.C., April, 1867.

MR. T. L. COTTINGHAM, MINING ENGINEER, VIEWER, AND AGENT.

COLLIERIES MINES, QUARRIES, AND MINERAL PROPERTIES INSPECTED, SURVEYED, VALUED, REPORTED ON, AND MANAGED. BORINGS, &c., CONDUCTED.

OFFICES,—No. 4, WREXHAM STREET, MOLD.

Agent for the National Steam Boiler Insurance Company (Limited).

Leases of several good Coal, Lead, and Slate Properties for sale.

JOHN HOCKING AND SON, ENGINEERS, REDRUTH, CALL the ATTENTION of COLLIERY PROPRIETORS and others to the present favourable opportunities for the purchase of secondhand CORNISH PUMPING ENGINES and BOILERS at cheap rates. Plans, valuations, removal, &c., of every description of mining machinery undertaken.

FOR SALE, ONE 36 in. PUMPING ENGINE, also an excellent CRUSHER.

MANCHESTER, AND WEST END OF LONDON

MR. W. HANNAM, MINING, SLATE QUARRYING, INSURANCE, AND GENERAL SHAREBROKER.

ROYAL INSURANCE BUILDINGS, KING STREET MANCHESTER; and 449, STRAND, LONDON, W.

INSTANTANEOUS COMMUNICATION with the STOCK and MINING EXCHANGES, avoiding the delay and annoyance of visiting the City to ascertain prices. A Monthly Investment Circular on application.

MINING OFFICES, MANCHESTER.

THOMAS MOLYNEUX AND CO., MINE AGENTS AND SHAREBROKERS. Reliable information can be obtained as to purchase and sale of shares.

Offices of the Ellen United Copper and Zinc Mining Company (Limited), and Hassel Grove Silver-Lead Mining Company (Limited). THOMAS MOLYNEUX, secretary, 28, Princess-street, Manchester

---

MR. CHARLES BAWDEN, MINING ENGINEER, ST. DAY' SCORRIER, CORNWALL, should be CONSULTED by CAPITALISTS as to the ADVISABILITY of PURCHASING in some MINES now selling at a low figure, and not far from a dividend state, while others are at a high price, and not the smallest probability of paying dividends.

CHARLES BAWDEN can recommend two mines in particular, which will shortly commence to pay dividends, selling at a low price.

Mines carefully inspected and reported on.

MR. D. STICKLAND, M.E., having had upwards of 40 years mining experience in Cornwall, several years of which he has had the entire management of mines therein, enables him to GIVE GOOD ADVICE thereon.

Mining, Railway, and other Shares bought, sold, or exchanged. Shares for sale in mines and quarries that will pay 15 to 20 per cent. per annum.

Offices, 5, Finsbury-street, London, E.C.

THE IRON TRADE CIRCULAR (RYLANDS').—The "IRON TRADE CIRCULAR" is eminently the Business Journal of the Mining Districts. Its information is authentic, unbiassed, and complete: comprising, not only the business news of the South Staffordshire District, but generally of the entire Mining Districts of the Kingdom. Annual subscription, £2 2s. (or 10s. 6d. quarterly in advance). Advertisements and orders to be addressed to Mr. GEORGE RYLAND, Union-passage, Birmingham.

[From the *Quarterly Trade Circular*, Pittsburgh, United States.]

"Among our foreign exchanges, there is one we had intended long since introducing to our readers, the 'Iron Trade Circular (Rylands'),' published weekly at Birmingham, England, at £2 2s. (postage free). To those who desire to be kept fully advised upon the foreign iron and hardware markets this publication is a valuable one, and we present its name to our readers, from conviction of its value to the American trade."

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Devon.

PURSUANT to an Order or Decree, made in the Cause of Blowey *v.* Metherell, the creditors in respect of the EAST BERTHA MINE, in the parish of Buckland Monachorum, within the said Stannaries, are, on the 27th day of April inst., at the hour of Eleven o'clock in the forenoon, to COME IN and PROVE THEIR DEBTS before the Registrar of the said Court, at his office in Truro, or in default thereof they will be peremptorily excluded the benefit of the said decree.

J. G. CHILCOTT, Truro

(Agent for E. Chilcott, plaintiff's solicitor, Tavistock).

Dated Registrar's Office, Truro, April 16, 1867.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Devon.

BLOWEY v. METHERELL.

IN RE EAST BERTHA MINE.

THE SALE of the MINING MACHINERY, MATERIALS, and other EFFECTS, advertised to be held at the above mine on the 25th day of April inst., WILL NOT TAKE PLACE until further notice.

JOHN GILBERT CHILCOTT, Truro

(Agent for Edward Chilcott, plaintiff's solicitor, Tavistock).

Dated Registrar's Office, Truro, April 16, 1867.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the NORTH SHEPHERDS MINING COMPANY.—Notice is hereby given, that a PETITION for the WINDING-UP of the ABOVE-NAMED COMPANY by the Court was, on the 12th day of April inst., presented to the Vice-Warden of the Stannaries by Thomas Richards, the managing agent, and also a shareholder of the said company, and that the said petition is directed to be heard before the Vice-Warden, at the Prince's Hall, Truro, in the county of Cornwall, on Thursday, the 9th day of May next, at Twelve o'clock at noon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioner, his solicitor, or his agents, of his intention to do so, such notice to be forthwith forwarded to P. P. Smith, Esq., secretary of the Vice-Warden, Truro.

Every such contributory or creditor is entitled to a copy of the petition and affidavit verifying the same, from the petitioner, his solicitor, or his agents, within 24 hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before the 6th day of May next, and notice thereof must at the same time be given to the petitioner, his solicitor, or his agents.

HODGE, HOCKIN, AND MARRACK, Truro, Cornwall.

(Agents for J. T. Trevena, Redruth, petitioner's solicitor).

Dated Truro, April 16, 1867.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the EAST TREFUSIS MINING COMPANY.—Notice is hereby given, that a PETITION for the WINDING-UP of the ABOVE-NAMED COMPANY by the Court was, on the 6th day of April inst., presented to the Vice-Warden of the Stannaries by Thomas Richards, the purser and also a shareholder of the said company, and that the said petition is directed to be heard before the Vice-Warden, at the Prince's Hall, Truro, in the county of Cornwall, on Thursday, the 9th day of May next, at Eleven o'clock in the forenoon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioner, his solicitor, or his agents, of his intention to do so, such notice to be forthwith forwarded to P. P. Smith, Esq., secretary of the Vice-Warden, Truro.

Every such contributory or creditor is entitled to a copy of the petition and affidavit verifying the same, from the petitioner, his solicitor, or his agents, within 24 hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before the 6th day of May next, and notice thereof must, at the same time, be given to the petitioner, his solicitor, or his agents.

HODGE, HOCKIN, AND MARRACK, Truro, Cornwall.

(Agents for J. T. Trevena, Redruth, petitioner's solicitor).

Dated Truro, April 16, 1867.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the PENHALE AND LOMAX CONSOLIDATED SILVER-LEAD MINING COMPANY (LIMITED).—The Registrar of the Court has appointed Friday, the 3d day of May next, at Eleven o'clock in the forenoon, at the Registrar's Office, at Truro, to SETTLE the LIST of CONTRIBUTORIES of the ABOVE-NAMED COMPANY, now made out and deposited at the said office.

WM. MICHELL, Registrar of the said Court.

Dated the 18th day of April, 1867.

THE CWM CELYN, BLAINA, AND COALBROOK VALE IRONWORKS.

BRAND C ◇ C.

IMPORTANT IRONWORKS IN MONMOUTHSHIRE.

MESSRS. FULLER AND HORSEY are instructed by the Liquidator to SELL, BY AUCTION, on Wednesday, June 5, at Two o'clock precisely, at the Auction Mart, London, in one lot, the important, extensive, and valuable FREEHOLD and LEASEHOLD MINERAL PROPERTIES, known as the—

CWM CELYN, BLAINA, and COALBROOK VALE IRONWORKS,

With the COLLIERIES, BLAST FURNACES, FORGE and ROLLING MILLS, and ENGINEERING WORKS, situate in the parish of ABERYSTRUTH, in the county of MONMOUTH, about twenty miles from the shipping port of Newport, and in direct communication therewith by means of the Monmouthshire Railway, which runs through the property, and of the Blaina Station, which is within a few yards of the entrance gates. The estates and works of Messrs. J. and C. Bailey and of the Blaenavon Company adjoin the property.

The total area of the MINERAL PROPERTY is 999A. 0R. 22P. of which 439A. 1R. 13P. are freehold, and 559A. 3R. 9P. are leasehold, and there are eleven seams of coal of the aggregate thickness of 41 ft., and seven courses of rich ironstone extending over the whole of this large area; there are also several veins of excellent fire-clay, used in the manufacture of bricks for the works. The minerals raised are the same as those raised at the works of the Blaenavon Company and of Messrs. J. and C. Bailey.

The COAL is a first-class coal for iron-making, or for sale for steam purposes, and the iron produced has a good reputation in the market, and the brand, or make, of the iron is well known in Great Britain, on the Continent, in the United States, and the Colonies. The extent and capacity of the works may be judged from the fact that the forges and mills have averaged for six years, ending 1865, a yearly make of 39,000 tons.

From a survey made in December, 1865, by Mr. John Hedley, the eminent mining engineer, the quantity of coal then unworked exceeded 30,000,000 tons, and of ironstone 7,300,000 tons. There are 11 pits on the freehold, from 60 yards to 210 yards in depth, for raising minerals down to the bottom seam, for pumping and for ventilating the mines, and the whole of the workings are most effectively drained. There are nine pits on the leasehold properties for the same purposes now in use, from 66 yards to 220 yards deep, and several shafts not now used, but which can be made available hereafter in winning measures not yet worked. The quantities of coal and mine raised on an average of six years have been 304,200 tons annually.

There are five blast-furnaces in operation (one new last year), four for hot-blast and one for cold-blast iron, with blowing engines and calcining kilns, 114 coke ovens, coke hearths, and two coal-washing machines. The forges and mills are erected on the freehold, and are fitted with 52 puddling-furnaces and two trains of puddling rolls, capable of turning out 900 tons of puddled iron per week, 29 balling and reheating furnaces, three trains of rolls for rails and bars, guide rolls, &c., two ranges of benches for straightening, punching, and shearing, very spacious and complete engineering works, with a costly assemblage of modern tools, including self-acting lathes, planing, drilling, slotting, shaping, and screwing machines, steam-hammer, smiths' shops, with forges and tools, locomotive shed, newly-erected gasworks, constructed to supply 10,000,000 cubic feet of gas annually, spacious timber saw-mill fitted with new machinery by Robinson, of Rochdale, including steam timber sawing frame, self-acting circular saw benches, band saw, &c., large iron foundry, with cranes, air-furnace and cupola brass foundry, detached stabling for about 150 horses, very complete offices, &c. The works are intersected with a permanent line of railway of the ordinary narrow-gauge width from seven to eight miles in length, besides a very large quantity of small iron tram-roads, both above and underground.

The ROLLING STOCK and MOVABLE PLANT, which will be included in the purchase, comprise 6 locomotive engines, 138 railway trucks, narrow-gauge, 50 trucks of pig-iron and metal, 130 furnace cinder carriages, about 2000 iron trams for raising the coal and ironstone, about 100 coke and mine barrows, about 70 tons of foundry boxes, 500 pairs of rolls, 350 tons duplicate castings for the forge and mill machinery, travelling cranes, and a large assortment of wood patterns.

The water supply is ample; the River Ebbw flows through the property, and there are several water-courses and large reservoirs, with connecting pipes, for working the balance pits, and for the other purposes of the works.

In addition to the mineral properties, and the works before described, there are upon the freehold property upwards of 400 dwelling-houses, producing a rental of upwards of £1500 per annum, and upwards of 500 dwelling-houses on the leasehold property, producing a rental of £1160 per annum. There are also two shops, houses for principals and agents, schools and chapels.

At Newport there is a commodious wharf, having a river frontage of 235 ft., occupying a site of nearly an acre and a quarter, with landing stage, erected on piles, on the foreshore of the river Usk, giving facility for vessels of 600 tons burden to lie and load alongside, and with seven lines of railway running down to the waterside, in connection with the Monmouthshire Railway.

The works may be viewed till the sale.

Printed particulars, with plan, may shortly be obtained by application to Mr. FREDERICK LEVICK, at the works; Messrs. FREDERICK LEVICK and Co., 4, Charlotte-row, Mansion House, London, E.C.; Messrs. QUILTER, BALL, and Co., 3, Moorgate-street, London, E.C.; Messrs. SECRETAN WOODHOUSE and COLBORNE, Solicitors, Newport; at the principal Inns at Cardiff, Swansea, Gloucester, and Bristol; at the Palatine Hotel, Manchester; at the *Midland Counties Herald* office, Birmingham; at the Mart, London; and of Messrs. FULLER and HORSEY, 19, Billiter-street, London, E.C.

GLAMORGANSHIRE.—VALUABLE COLLIERY.

MR. ROBERT EVANS WILL SELL, BY AUCTION, at the Castle Hotel, Neath, on Thursday, the 25th day of April, 1867, in One Lot (unless previously disposed of by private contract), the VALUABLE COLLIERY, known as—

THE VENALLT STEAM COAL COLLIERY,

In full working order, situate at Glyn-Neath; comprising VALUABLE SEAMS of STEAM COAL, IRON ORE, and BLACKBAND. Among the seams in the Upper Series is included the famous Resolven vein of steam coal, on the Admiralty List, and extensively worked on the adjoining property. The minerals taking comprises about 430 acres.

The Vale of Neath Railway (broad and narrow gauge) runs through the Venallt Estate, placing the colliery in direct communication with the ports of Swansea, Port Talbot, and Briton Ferry (less than 15 miles distant); also with Liverpool and the North; and by the Great Western Railway there is direct communication with London; the tolls between the colliery and the Paddington Terminus (including City dues) being under 8s. per ton.

All the necessary works, appliances, and buildings have been erected, and very commodious broad and narrow gauge railway sidings, tipping stages, and roads formed, and about 20 cottages are held at moderate rents.

The two upper veins have been thoroughly opened by level and slant; at the present time from 100 to 150 tons of coal a-day can be raised, which within six weeks could be increased to 200 tons.

Particulars and conditions of sale, with plan, may be obtained of Messrs. TUCKER and NEW, solicitors, 4, King-street, Cheapside, London; and of Mr. ROBERT EVANS, land agent and auctioneer, Bridgend. May be viewed by giving one day's previous notice to Mr. WILLIAM EVANS, agent, Venallt Colliery, Glynn-Neath.

CORNWALL.

THE NORTH SHEPHERDS SILVER-LEAD MINE, together with the ENGINE, PLANT, AND MATERIALS.

MR. MARSH WILL SELL, BY AUCTION, at the Guildhall Coffee-house, London, on Thursday, May 2, at Twelve o'clock, in one lot, the VALUABLE LEASE for 17 years unexpired of the NORTH SHEPHERDS SILVER-LEAD MINE, situate in the parish of NEWLYN, near TRURO, also the ENGINE, PLANT, and MATERIALS. May be viewed, and particulars with conditions of sale, obtained at the mine; of C. J. COLE, Esq., 2, New Broad-street; of Mr. J. BERRY, Solicitor, 16, Walbrook, London; and at Mr. MARSH'S temporary office, 54, Cannon-street, E.C.

FOREST OF DEAN, GLOUCESTERSHIRE.

VALUABLE MINING PROPERTY.

MR. C. A. COURT WILL SELL, BY AUCTION, at the Angel Hotel, Coleford, on Wednesday, the 8th day of May, 1867, at Three o'clock P.M., subject to conditions of sale, to be then produced:—

THE ATLAS IRON MINE GALE.

LOT 1.—The ATLAS IRON MINE GALE, situate near to the town of Coleford, and in the parish of Newland and township of West Dean. The Gale comprises all the VEINS of IRON ORE underneath an area of 450 acres, or thereabouts.

The Gale is situate within half a mile of the intended route of the Worcester, Dean Forest, and Monmouth Railway, for which an Act has been obtained. The valuable nature of the Forest of Dean iron ore is well known. The yield of the Easter Iron Mine, which adjoins this Gale, has been very abundant, and of the richest quality. The Coleford Iron Mine Gale, which also adjoins the Atlas Gale, was purchased by the present proprietors, prior to the passing of the Worcester, Dean Forest, and Monmouth Railway Bill, for £10,000.

The Atlas Gale is sufficiently extensive to be divided into two or more independent and valuable works.

The lowest vein of iron ore will be won by sinking to a depth of 150 or 200 yards, and the upper vein will be reached at 110 yards, or thereabouts.

The inclination of the strata is slight, and the cost of winning the lower vein is expected to be moderate. The Gale is held under a grant from the Crown, which will be produced at the sale, or can be inspected previously.

For further particulars apply to Messrs. POWLES and EVANS, solicitors, Monmouth; Mr. WILLIAM ROBERTS, jun., solicitor, Coleford; or the Auctioneer, Monmouth.

COUNTY OF GLAMORGAN.

VALUABLE FREEHOLD LANDS AND MINERALS.

MR. H. W. HARRIS WILL SELL, BY AUCTION, on Thursday, the 30th day of May, 1867, at the Queen's Hotel, Cardiff, at Two o'clock in the afternoon, subject to such conditions of sale as shall be then produced, all that valuable FREEHOLD FARM and LANDS, called

"PANTANNAS FARM," with the MINERALS

Thereunder, situate near Quaker's Yard, in the parish of Merthyr Tydfil, Glamorganshire, containing by estimation, FIFTY ACRES, a little more or less.

The whole of the farm consists of arable and pasture land, with some good timber thereon, and is bounded by the Bargoed River on the east; on the west and west by the River Taff and the lands of Lady Windsor; and on the north by lands of Colonel Wood. The whole of the minerals and coal measures of the district are beneath this farm.

The West Midland Railway and the turnpike-road leading from Merthyr to Cardiff runs through the land.

The farm is situate in one of the best localities in the neighbourhood for building purposes, for the erection of any works for manufacturing purposes, or for the erection of villas, having good roads and approaches thereto, and being within seven miles of the towns of Merthyr Tydfil and Aberdare, that, combined with the varied scenery and picturesque beauty of the neighbourhood, would make it a desirable and healthy place of residence for gentlemen retired from business.

Some portion of the land is now under a building lease, producing a rental of £5 per annum, and another portion is under a farming lease for twenty-one years, commencing from the 2d day of February, 1858, at a rental of £9 per annum, and the present gross rental of the whole farm is £45 per annum. Two-thirds of the purchase-money may remain on mortgage at 4 per cent., if required.

For further particulars apply to JOHN PERROTT, Esq., Hengoed Hall, Gelligare; Messrs. C. H. and F. JAMES, Solicitors, Merthyr; Mr. WILLIAM DAVIS, of the Perrott Inn, near Quaker's Yard (who will show the premises); or to the Auctioneer, 140, High-street, Merthyr.—Auctioneer's Office, April 13th, 1867.

NANTY LEAD MINE, PARISH OF LLANGWRIG, MONTGOMERYSHIRE.—Notice is hereby given, that this Mine, held on leases from Mrs. A. Warburton Owen and Sir Watkin W. Wynn, Bart., of which about 17 years are unexpired, with all the VALUABLE MACHINERY and PLANT, including—

An excellent 14 inch horizontal high-pressure STEAM ENGINE, with 32 feet BOILER, &c.,

WATER WHEEL and CRUSHING MILL, and everything necessary for the immediate resumption of operations,

Will be OFFERED FOR SALE, BY AUCTION, about the latter end of May unless previously disposed of by private contract.

The Mine is in excellent working order, and is well worthy of being prosecuted, a large part of the sett being unproved, and offering good chances of success by a spirited exploration. It is four miles from Llangwrig Railway Station, and is on the main road from Llanidloes to Aberystwith.

Parties disposed to treat for the Mine and Machinery as a working concern are requested to apply to Mr. HENRY THOMAS, liquidator of the Nanty Mining Company (Limited), 5, Queen-street-place, Upper Thames-street, London, E.C.

WEST NANTY LEAD MINE, PARISH OF LLANGWRIG, MONTGOMERYSHIRE.—Notice is hereby given, that this mine, with all the MACHINERY and PLANT thereon, will be OFFERED FOR SALE BY AUCTION, unless previously disposed of by private contract, about the latter end of May next.

The sett is extensive, and is held under lease from Sir Watkin W. Wynn, Bart., for 21 years, from December, 1863, at 1-16th royalty. The mine has recently been supplied with excellent pumping, winding, and crushing machinery, now nearly as good as new, and is well furnished with all necessary plant for immediately resuming the working, and for its effective development.

A very limited proof has yet been given to this mining ground, which is worthy of being more extensively worked.

The property communicates by a good road with the main coach road from Llanidloes to Aberystwith, and is about five miles from Llangwrig Railway station.

Parties willing to treat for the mine and machinery, with the object of continuing the workings, are requested to apply to Mr. HENRY THOMAS, liquidator of the West Nanty Mining Company (Limited), 5, Queen-street-place, Upper Thames-street, London, E.C.

THE HEIDBERG LEAD AND COPPER MINE, one of the most promising in WESTPHALIA, situate one mile from the Wildberg Mines, is ON SALE. The want of steam-engines has hitherto been an hindrance to the working of its fine ores. It affords a rich field of enterprise and success to mining proprietors.

Particulars may be obtained from the agent, Mr. E. KLAPPERT, through letters addressed to Mr. H. K. KLAPPERT, Haverfordwest.

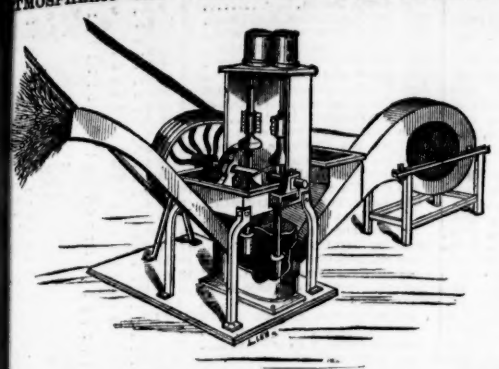
MINES NEAR RUABON.—TO BE LET, ON LEASE, the VERY VALUABLE MINES of COAL and IRONSTONE in and under a large tract of land within a short distance from RUABON, containing the well-known mines of the district, also clay of the finest quality, well adapted for the making of fire and other bricks, and for all varieties of earthenware. The whole being most favourably situate with respect to facility of conveyance. For further particulars application in writing may be made to "A. F. E.," MINING JOURNAL office, 26, Fleet-street, London.

FOR SALE, and may be seen at the Ashburton Mines, CORNWALL, 56 in. PUMPING ENGINE, with TWO 11 ton CORNISH made BOILERS; ONE 40 in. PUMPING ENGINE, only made a short time, and as good as new, with an 11 ton BOILER. A 24 in. WHIM ENGINE, with stamps attached. One 11 ton BOILER. Several WATER-WHEELS of various sizes, one with an excellent drawing machine attached. Pumps and materials of all sorts and sizes.—Application may be made to Mr. W. MATHEWS, engineer, Tavistock, or can be seen on application to people in charge of the mine.

TO BE SOLD, CHEAP, a PORTABLE ENGINE of 14-horse power, double cylinder, of first-class construction, workmanship, and material. Winding gear to order. SECOND-HAND PORTABLES FOR SALE.—Apply to Messrs. BARROWS and CARMICHAEL, engineers, Banbury, Oxon.

TO BE SOLD, CHEAP, a DIRECT-ACTING PUMPING ENGINE, the cylinder 2 ft. 6 in. diameter, and 6 ft. stroke. The pumps are 12 in. diameter, and 6 ft. stroke, double-acting, and have been at work only six months.—Apply at Botteslow Colliery, Stoke-upon-Trent.

CHILDS' PATENT
ATMOSPHERIC ORE STAMP AND QUARTZ CRUSHER.



THIS is an IMPROVED STAMP, and will give as many blows per minute as an ordinary 10-stamp mill, and of far greater force, giving effective blow of from 150 to 200 tons per minute, and will crush any known an impalpable powder, saving every particle of the product for future ations,—a result not before obtained by any stamping process. Greater ny is combined than by any other known method. The patentee has a machine near his office, where he invites (by appointment) experienced practical miners, engineers, chemists, metallurgists, and all others inter- to inspect its results. Every facility will be given for experiments upon nt ores, and all other substances to be crushed.

particulars, address— A. B. CHILDS,

No. 481, NEW OXFORD STREET, LONDON, W.C. 140

PRENTICE'S GUN COTTON
COMPRESSED CHARGES
FOR MINING AND QUARRYING.

The principle thus introduced insures the most perfect attainment of the points essential for the safety and stability of the material, at the same time securing the highest effective power.

A charge of any given size exerts six times the explosive force of gunpowder.

The enormous power confined in a short length at the bottom hole allows of a much greater amount of work being placed before each aving considerably in the labour of drilling.

ges are made of every diameter required, the length varying with the er. Any number may be placed in a hole. Each charge is fully equal to th of a pound of powder.

PRICES.

Per case, containing 500 charges of any diameter ..... 35s.
Per half case, containing 250 charges of any diameter ..... 18s.
Per quarter case, containing 125 charges of any diameter .... 9s.

Terms,—cash.

MANUFACTURED BY

AS PRENTICE AND CO., 82, GRACECHURCH STREET, LONDON.
WORKS, STOWMARKET.
LONDON AGENT,—Mr. THORNE.

TRO-GLYCERINE, OR NOBEL'S PATENT BLASTING OIL.—The EXPLOSIVE FORCE of this BLASTING OIL is TEN TIMES GUNPOWDER, and the ECONOMY and SAVING in TIME, LABOUR, OST in removing granite and hard rock, in sinking shafts, driving tun- nd opening forward in close ends is immense.

ll not explode from a spark or fire, but from concussion alone, and is con- ly much less dangerous than gunpowder or gun-cotton.

heavier than water it sinks to the bottom of a wet hole, no other tamp- in water being required.

harge of this blasting oil, which is now being used with wonderful effect he largest slate quarries in North Wales, will displace as much slate rock or five charges of gunpowder; and its great force, acting on a large y of good slate rock, shakes and displaces it at the natural joints, or without damaging the slabs nearly so much as the more numerous rom any other blasting material would do.

invaluable quarrying agent may now be obtained from Messrs. WYNN ., Carnarvon, sole consignees from the patentee.

CKFORD'S PATENT SAFETY-FUSE OBTAINED the PRIZE MEDALS at the ROYAL EXHIBITION of 1851, at the INTER- NAL EXHIBITION of 1862, in London, and at the IMPERIAL EX- ION held in Paris, in 1865.

BICKFORD, SMITH, AND CO., of TUCKINGMILL, CORNWALL, MANUFACTURERS of PATENT SAFETY-FUSE, having been informed that the name of their firm has been attached to fuse not of their manufacture, beg to call the attention of the trade and public to the following announcement:—

EVERY COIL of FUSE MANUFACTURED by them NO SEPARATE THREADS PASSING THROUGH the COLUMN of WDER, and BICKFORD, SMITH, AND CO. CLAIM SUCH TWO SE- E THREADS as THEIR TRADE MARK. 143

THOMAS TURTON AND SONS,
MANUFACTURERS OF
CAST STEEL for PUNCHES, TAPS, and DIES,
TURNING TOOLS, CHISELS, &c.
CAST STEEL PISTON RODS, CRANK PINS, CONNECTING RODS, STRAIGHT and CRANK AXLES, SHAFTS and FORGINGS of EVERY DESCRIPTION.

DOUBLE SHEAR STEEL	FILES MARKED
BLISTER STEEL,	T. TURTON.
SPRING STEEL,	EDGE TOOLS MARKED
GERMAN STEEL,	WM. GREAVES & SON.

Locomotive Engine, Railway Carriage and Wagon Springs and Buffers.

HEAF WORKS AND SPRING WORKS, SHEFFIELD. 144
N WAREHOUSE, 35, QUEEN STREET, CANNON STREET, CITY, E.C., here the largest stock of steel, files, tools, &c., may be selected from.

JOHN AND EDWIN WRIGHT,
PATENTEES.
(ESTABLISHED 1770.)
MANUFACTURERS OF EVERY DESCRIPTION OF IMPROVED
PATENT FLAT AND ROUND WIRE ROPES,
From the very best quality of charcoal iron and steel wire.
PATENT FLAT AND ROUND HEMP ROPES.
RIGGING, SIGNAL AND FENCING STRAND, LIGHTNING CONORS, STEAM PLOUGH ROPES (made from Webster and Horsfall's ent steel wire), HEMP, FLAX, ENGINE YARN, COTTON WASTE, TARPAULING, OIL SHEETS, BRATTICE CLOTHS, &c.

UNIVERSE WORKS, MILLWALL, POPLAR, LONDON. 145
UNIVERSE WORKS, GARRISON STREET, BIRMINGHAM.
No. 2, OSWALD STREET, GLASGOW.
CITY OFFICE, No. 5, LEADENHALL STREET, LONDON, E.C.

Swan Rope Works.

ARNOCK, BIBBY, AND CO.,
CHAPEL STREET, LIVERPOOL,
UFACTURERS of FLAT and ROUND HEMP and IRON and STEEL ROPES for MINING, RAILWAY, and SHIPPING PURPOSES.
ILLA ROPE of SUPERIOR QUALITY, FIFTY PER CENT. STRONGER IRTY PER CENT. CHEAPER than Russian hemp rope.
ROPE of FIRST QUALITY WIRE, and the HIGHEST STANDARD ENGTH. 146

CASE'S NEW AND IMPROVED PATENT BORING MACHINE.
—In consequence of the various and IMPORTANT IMMENTS that an experience of several years has enabled the inventor duce into these machines, he can with the most perfect confidence re- nd them for their increased DURABILITY, SIMPLICITY, ECONOMY, RED to be attained by their adoption in DRIVING LEVELS or DRIFTS. ventor has made arrangements to supply them in any quantity, with ry. Orders executed according to their date of priority.
s, EDWARD S. CREASE, Tavistock, Devon. 147

ASTIER'S CHAIN PUMP.
his patent pump is the MOST EFFICIENT in existence for LIFTING UANTITY of WATER from ANY DEPTH. One lifting from a depth may be seen at work daily, on application to the

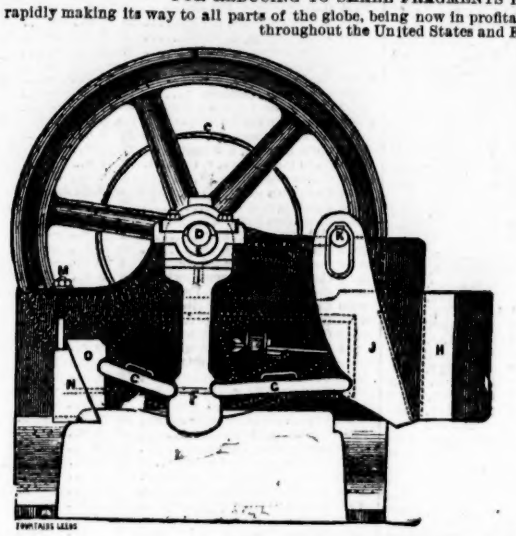
SOLE LICENSEES,
ERS. J. JACKSON AND CO., ENGINEERS, 17, GRACECHURCH STREET, LONDON, E.C.,
Who SUPPLY PUMPS and LICENCES.
unications to Mr. Bastier, the patentee, to be sent to the same address.

FOR THE COUNTIES OF NORTHUMBERLAND AND DURHAM, YORKSHIRE, DERBYSHIRE, AND NORTH STAFFORDSHIRE,
Mr. THOMAS GREENER, MINING OFFICE, NORTHGATE, DARLINGTON.
AGENTS FOR SCOTLAND.
RS. P. and W. MACLELLAN, 127 and 129, IRONGATE, GLASGOW. 148

IMMENSE SAVING OF LABOUR.
TO MINERS, IRONMASTERS, MANUFACTURING CHEMISTS, RAILWAY COMPANIES, EMERY AND FLINT GRINDERS, McADAM ROAD MAKERS, &c., &c.

BLAKE'S PATENT STONE BREAKER,
OR ORE CRUSHING MACHINE,
FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND MINERALS OF EVERY KIND.

It is rapidly making its way to all parts of the globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States and England. Read extracts of testimonials:—



The Parys Mines Company, Parys Mines, near Bangor, June 6.—We have had one of your stone breakers in use during the last twelve months, and Captain Morcom reports most favourably as to its capabilities of crushing the materials to the required size, and its great economy in doing away with manual labour.
For the Parys Mining Company, JAMES WILLIAMS.
H. R. Marsden, Esq.

Ecton Emery Works, Manchester.—We have used Blake's patent stone breaker made by you, for the last 12 months, crushing emery, &c., and it has given very satisfaction. Some time after starting the machine a piece of the moveable jaw about 20 lbs. weight, chilled cast-iron, broke off, and was crushed in the jaws of the machine to the size fixed for crushing the emery.
H. R. Marsden, Esq. THOS. GOLDSWORTHY & SONS.

Alkali Works, near Wednesbury.—I at first thought the outlay too much for so simple an article, but now think it money well spent. WILLIAM HUNT.

Welsh Gold Mining Company, Dolgelly.—The stone breaker does its work admirably, crushing the hardest stones and quartz. WM. DANIEL.

Our 15 by 7 in. machine has broken 4 tons of hard whinstone in 20 minutes, for fine road metal, free from dust. Messrs. ORD and MADDISON,
Stone and Lime Merchants, Darlington.

Kirkless Hall, near Wigan.—Each of my machines breaks from 100 to 120 tons of limestone or ore per day (10 hours), at a saving of 4d. per ton.
JOHN LANCASTER.

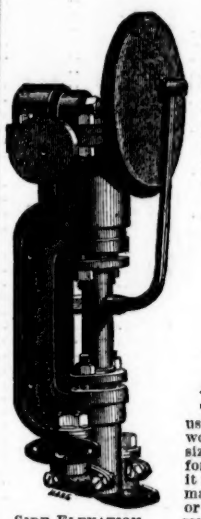
Ovoca, Ireland.—My crusher does its work most satisfactorily. It will break 10 tons of the hardest copper ore stone per hour. WM. G. ROBERTS.

General Frémont's Mines, California.—The 15 by 7 in. machine effects a saving of the labour of about 30 men, or $75 per day. The high estimation in which we hold your invention is shown by the fact that Mr. Park has just ordered third machine for this estate. SILAS WILLIAMS.

For circulars and testimonials, apply to—

H. R. MARSDEN, SOHO FOUNDRY,
MEADOW LANE, LEEDS,
ONLY MAKER IN THE UNITED KINGDOM. 149

THE NEW PATENT INJECTOR,
FOR FEEDING BOILERS AND RAISING WATER FOR OTHER PURPOSES.



SIDE ELEVATION.

[SPECIFICATION.]

This injector is a steam-pump, constructed on a principle entirely new and of great simplicity. The crank-shaft and fly-wheel are of small size, and the slide-valve is worked inside the steam chest by means of a steel crank and friction roller, thus dispensing with eccentric, rod, and straps. All the working parts are made of steel, hardened and polished. The cylinder and pump are in one casting, and bored throughout the body of the pump as well as the stuffing-box. The pump-ram is of the best gun-metal, being cast in one piece with the piston and piston-rod, and fitted accurately to the bored body of the pump, thus ensuring a nearly perfect vacuum in pumping. The stuffing-box glands are also of gun-metal polished. The valves and boxes are of the best gun-metal, the valves being of the spherical description, the covers fitted with brass cages, and the joints faced metal to metal. The slide-valve is of hard bell-metal. The steam-chest, with cylinder end, is in one piece, and may be removed without disturbing either steam or exhaust pipes. The whole engine may be taken to pieces and put together under steam in fifteen minutes, without disturbing any pipes whatever.

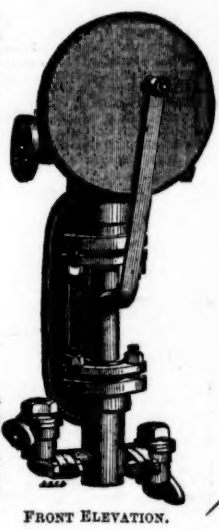
PRICES, DELIVERED IN LONDON:—

Size.	Ram. in.	Stroke. in.	Approx. h.p. boiler supplied.	Approx. gallons thrown per hour. At 100 rev.	150 rev.	200 rev.	p. min. Price.
No. 4	1⅛	3	15	115	172	230	£10 10
5	1⅜	3	22	180	270	360	12 12
6	1⅞	4	30	240	360	480	14 14
7	2¼	4	40	345	517	690	17 0
8	2¼	5½	55	475	712	950	19 10
9	2½	5½	75	585	877	1170	22 10
10	2½	6¾	90	720	1080	1440	25 10
11	2¾	6¾	110	870	1305	1740	28 10
12	2¾	8	120	1030	1545	2060	31 10

Terms: Nett Cash on Delivery.

All guaranteed to work efficiently, and any one failing to give entire satisfaction may be at once returned.

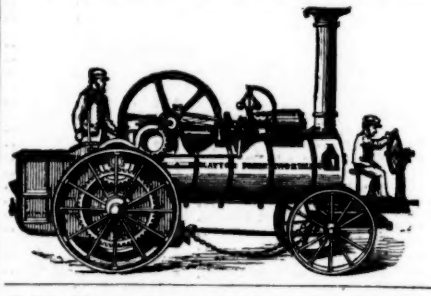
This injector will force water at or under a temperature of 212° Fahr. It will draw water 15 ft., or by using one size larger than required for forcing the quantity, it will draw from a depth of 30 ft. It will work with a pressure of steam of 15 lbs. per square inch; to work at a lower pressure the next larger size must be used, which is made with a reduced ram. This instrument will not become encrusted through forcing bad water, and it will force semi-fluids. Any unskilled labourer may work it, and after starting it requires no attention. The ordinary speed of working is 150 revolutions per minute, but higher speeds may be used without harm to the engine. Larger sizes, and special pumps for throwing water into tanks, or for use as fire-engines, can be made in a few days. A circular, with full explanation and comparisons, will be sent on application.



FRONT ELEVATION.

BROWN, WILSON, AND CO.,
80, CANNON STREET, E.C.; AND VAUXHALL IRONWORKS, LONDON, S. 150

CLAYTON, SHUTTLEWORTH, AND CO.,
LINCOLN,
And 78, LOMBARD STREET, LONDON.



Illustrated Catalogues containing the latest revised Price Lists and particulars of
PORTABLE AND STATIONARY STEAM ENGINES
(from 4 to 40-horse power), Thrashing, Grinding, Pumping, Sawing Machinery, &c., will be forwarded free on application as above.

TRACTION ENGINES for COMMON ROADS, and for STEAM CULTIVATION 151

NOTE.—Nearly 8000 Engines and 6000 Thrashing Machines have been made by this firm within the last few years.

THE PATENT PLUMBAGO CRUCIBLE COMPANY.
SOLE MANUFACTURERS UNDER MORGAN'S PATENT,
BATTERSEA WORKS, LONDON, S.W.

Some unprincipled manufacturers having made such close imitations of our Trade Mark as cannot fail to deceive the public, we have deemed it advisable to alter our Mark as here shown. It will be observed that the alteration consists in the OMISSION of the words—"DEPOTS AT PARIS AND ROTTERDAM," and the ADDITION of the words—"MORGAN'S PATENT."

MORGAN'S PATENT PLUMBAGO CRUCIBLE COMPANY * BATTERSEA WORKS LONDON

152

In all future orders, please specify "MORGAN'S PATENT," and address to
BATTERSEA WORKS, LONDON, S.W.

THE NEWCASTLE CHRONICLE AND NORTHERN COUNTIES ADVERTISER. (ESTABLISHED 1764.)
Published every Saturday, price 2d., or quarterly 2s. 2d.
THE DAILY CHRONICLE AND NORTHERN COUNTIES ADVERTISER.
Offices, 42, Grey-street, Newcastle-upon-Tyne; 50, Howard-street, North Shields; 195, High-street, Sunderland.

DR. WATSON (of the Lock Hospital), F.R.A.S., Member of the College of Physicians and Surgeons, on the SELF-CURE of NERVOUS and PHYSICAL DEBILITY, Lowness of Spirits, Loss of Appetite, Timidity, Incapacity for Exertion, &c., with means for perfect restoration. Sent free for two stamps by Dr. WATSON, No. 1, South-crescent, Bedford-square, London. Consultations daily from 11 till 3, and 6 till 8; Sundays, 10 till 1.

Just published, post free for two stamps,
WONDERFUL MEDICAL DISCOVERY, demonstrating the true causes of Nervous, Mental, and Physical Debility, Lowness of Spirits, Indigestion, Want of Energy, Premature Decline, with plain directions for perfect restoration to health and vigour, WITHOUT MEDICINE. Sent free on receipt of two stamps, by W. HILL, Esq., M.A., Berkeley House, South-crescent, Russell-square, London, W.C.

NERVOUS DEBILITY: ITS CAUSE AND CURE.—Before seeking aid from the so-called remedies without medicine, read this valuable work on the Treatment and Cure of Nervous and Physical Debility, Loss of Appetite, Pains in the Back, Spermatorrhœa, &c., with Plain Directions for Perfect Restoration to Health. Sent post free to any address, on receipt of two postage stamps. Letters of enquiry or details of case promptly answered.
Address, Dr. SMITH, 8, Burton-crescent, London, W.C. 153

CONSULT DR. HAMMOND (of the Lock Hospital, &c.), No. 11, Charlotte-street, Bedford-square, London, W.C., in all those ailments which tend to embitter and shorten life, and especially those termed peculiar and confidential. At home, Nine to Two, and Six to Eight; Sundays, Ten to Twelve The "Self-Curative Guide" post free, two stamps.
N.B.—Cases of recent infection cured in two days. 154

CURE YOURSELF BY THE PATENT SELF-ADJUSTING CURATIVE AND ELECTRIC BELT.—Sufferers from nervous debility, painful dreams, &c., can now cure themselves by the only guaranteed remedy in Europe, protected by Her Majesty's great seal. Free for one stamp by H. JAMES, Esq., Percy House, Bedford-square, London.
N.B.—Medicines and fees superseded. 155

THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.
500	Alderley Edge, *c*, Cheshire*	10 0 0..	— ..	..	8 12 8..	0 5 0	..Jan. 1867
200	Botallack, *t*, *c*, St. Just	91 5 0..	— ..	..	488 15 0..	5 0 0	..May, 1866
10000	British Slate Company	10 0 0..	— ..	..	9 per cent.		..Sept. 1866
4000	Brookwood, *l*	1 11 0..	— ..	..	0 5 0..	0 2 6	..Sept. 1866
1000	Bronfloyd, *l*, Cardigan*	12 0 0..	— ..	..	8 7 0..	0 6 0	..Aug. 1866
6400	Cashwell, *l*, Cumberland*	2 10 0..	— ..	..	0 1 6..	0 1 6	..Aug. 1866
916	Cargoll, *s-l*, Newlyn	15 5 7..	11 ..	..	13 15 0..	1 0 0	..Feb. 1866
1867	Cwm Erfin, *l*, Cardiganshire*	7 10 0..	— ..	..	22 18 0..	1 0 0	..April 1867
128	Cwmystwith, *l*, Cardiganshire	60 0 0..	— ..	..	376 10 0..	4 0 0	..Feb. 1867
280	Derwent Mines, *s-l*, Durham	300 0 0..	— ..	..	169 10 0..	2 10 0	..Mar. 1867
1024	Devon Gt. Consols, *c*, Tavistock†..	1 0 0..	390 ..	890 400	..1054 0 0..	6 0 0	..Mar. 1867
358	Dolcoath, *c*, *t*, Camborne	128 17 6..	— ..	..	825 10 0..	4 0 0	..April 1867
6144	East Caradon, *c*, St. Cleer†	2 14 6..	6½..	6 6¼	14 9 6..	0 2 0	..April 1867
300	East Darren, *l*, Cardiganshire	32 0 0..	— ..	..	140 10 0..	2 0 0	..Mar. 1867
128	East Pool, *t*, *c*, Pool, Illogan	24 5 0..	— ..	..	392 10 0..	2 10 0	..Mar. 1867
5000	East Rosewarne, *c*, *t*, Gwinear	2 15 0..	— ..	¾ 1	0 10 6..	0 1 6	..Jan. 1866
1906	East Wheal Lovell, *t*, Wendron	3 9 0..	8½..	8½ 9	2 15 0..	0 7 6	..April 1867
2800	Foxdale, *l*, Isle of Man*	25 0 0..	— ..	..	70 0 0..	0 10 0	..Mar. 1867
3000	Frank Mills, *l*, Christow	3 18 6..	— ..	228. 25s.	3 5 6..	0 5 0	..Feb. 1866
5000	Great Laxey, *l*, Isle of Man*	4 0 0..	18 ..	17½ 18	6 5 0..	0 10 0	..Mar. 1867
5908	Great Wheal Vor, *t*, *c*, Helston†	40 0 0..	19 ..	18½ 19½	11 5 6..	0 7 6	..Mar. 1867
1024	Herodsfoot, *l*, near Liskeard†	8 10 0..	34 ..	32 34	40 10 0..	1 10 0	..Feb. 1867
6000	Hingston Down, *c*	5 10 6..	— ..	..	0 10 0..	0 5 0	..April, 1866
400	Lisburne, *l*, Cardiganshire	18 15 0..	— ..	..	489 10 0..	3 0 0	..Mar. 1867
9000	Marke Valley, *c*, Caradon	4 10 6..	4½..	4¼ 4½	3 14 0..	0 3 0	..April 1867
2000	Minera Boundary, *l*, Wrexham*	1 0 0..	— ..	..	0 13 0..	0 0 3	..Mar. 1866
1800	Minera Mining Co. *l*, Wrexham*	25 0 0..	160 ..	150 160	208 13 0..	3 5 0	..Feb. 1867
20000	Mining Co. of Ireland, *c*, *l*, *cl*	7 0 0..	17 ..	16¼	— ..	0 5 7	..Jan. 1867
40000	Mwyndy Iron Ore*†	3 5 0..	— ..	..	0 6 6..	0 2 6	..Mar. 1866
—	New Merrybent and Middleton*	3 10 0..	— ..	..	5 per cent.		..Nov. 1866
200	Parys Mines, *c*, Anglesey*	50 0 0..	— ..	..	157 10 0..	5 0 0	..Jan. 1866
6000	Prosper United, *t*, *c*, St. Hilary	8 14 0..	3¼..	3 3¼	0 5 0..	0 5 0	..Feb. 1867
1120	Providence, *t*, Uny Lelant†	10 6 7..	31 ..	29 31	82 7 6..	0 10 0	..Feb. 1867
512	South Caradon, *c*, St. Cleer†	1 5 0..	320 ..	320 330	550 10 0..	6 0 0	..Mar. 1867
6000	South Darren, *l*	3 6 6..	— ..	..	0 5 6..	0 2 6	..June, 1866
6000	Tincroft, *c*, *t*, Pool, Illogan†	9 0 0..	13 ..	12 13	18 11 0..	0 5 0	..Jan. 1867
3000	W. Chiverton, *l*, Perranzabuloe†	10 0 0..	73 ..	71 73	17 7 6..	0 2 0	..Feb. 1867
400	West Wheal Seton, *c*, Camborne†	47 10 0..	140 ..	130 135	470 0 0..	3 0 0	..April 1867
512	Wheal Basset, *c*, Illogan†	5 2 6..	65 ..	60 70	622 0 0..	1 0 0	..Oct. 1866
1024	Wheal Friendship, *c*, Tavistock	20 0 0..	— ..	..	300 10 0..	0 10 0	..Nov. 1866
4295	Wheal Kitty, *t*, St. Agnes	5 4 6..	2¾..	..	3 1 0..	0 2 0	..Feb. 1867
1024	Wheal Mary Ann, *l*, Menheniott	8 0 0..	14 ..	13 14	61 0 0..	0 12 6	..Mar. 1867
2000	Wheal Rose, *c*, Scorrier	— ..	— ..	..	1 0 0..	0 10 0	..Feb. 1866
896	Wheal Seton, *t*, *c*, Camborne	58 10 0..	105 ..	27½ 102½..	241 15 0..	2 10 0	..April 1867
1040	Wheal Trelawny, *s-l*, Liskeard†	5 17 0..	— ..	..	54 10 6..	0 5 0	..Mar. 1867
7000	Wicklow, *c*, *i*, Wicklow	2 10 0..	— ..	22 24	45 15 0..	0 18 0	..Oct. 1866

FOREIGN DIVIDEND MINES.

5000	Cape Copper Mining*†	7 0 0..	7½..	7 7½	2 12 6..	0 10 0	..April, 1866
100000	Don Pedro No. del Rey, Brazil*†	0 14 0..	21s. ..	1 1¼	0 2 9..	0 2 0	..Mar. 1867
25000	Fortuna, *l*, Spain*†	2 0 0..	2⅛..	1½ 2⅛	1 5 4..	0 2 0	..Oct. 1867
70000	English and Australian, *cl*	2 10 0..	⅞..	½ ¾	1 13 0..	0 1 0	..Feb. 1867
20000	Gen. Mining Assoc., Nova Scotia†	20 0 0..	20 ..	18 20	22 0 0..	1 0 0	..June, 1866
10000	Gonnesa, *l*,* [5000 £5 pd., 5000 £4 pd.]	— ..	— ..	..	7½ per cent.		per annum.
15000	Linares, *t*, Spain*†	3 0 0..	— ..	1 1½	11 6 4..	0 5 0	..Jan. 1865
30000	Pestarena, *g*††	2 0 0..	2 ..	1½ 2	0 2 6..	0 2 6	..Mar. 1867
50000	Panulcillo, *c*††	3 0 0..	2½..	2 2½	10 per cent.		.. Yearly.
10000	Pontgibaud, *s-l*, France†	20 0 0..	8½..	7½ 8½	4 3 2..	1 3 6	..Dec. 1866
100000	Port Phillip, *g*, Clunes†	1 0 0..	¾..	½ ¾	0 16 6..	0 1 0	..Jan. 1867
120000	Scottish Australian Mining Co.†	1 0 0..	1 ..	¾ 1	7¼ per cent.		..Mar. 1867
11000	St. John del Rey, Brazil*†	15 0 0..	56 ..	55 57	72 15 0..	4 0 0	..Dec. 1866
50000	Victoria (London) [25000 £1 pd., 25000 12s. 6d. pd.]			..	0 9 0..	0 1 0	..Jan. 1866
40000	West Canada Mining Company*..	1 0 0..	— ..	..	0 19 6..	0 2 6	..May, 1866

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
35000	Alamillos, *l*, Spain*†	2 0 0 ..	1¼..	¾ 1	..Fully pd.
100000	Anglo-Brazilian, *g*††	0 10 0 ..	⅜..	¼ ⅜	..Nov. 1866
10000	Alten und Quænangen United, *c*†‡	4 10 0 ..	— ..	..	..
20000	Australian, *c*, South Australia†‡	7 7 6 ..	— ..	..	..
40000	Brittany Silver-Lead Mines, France* [15750 18s. pd.]	— ..	— ..	..	..
2464	Burra Burra, *c*, South Australia‡	5 0 0 ..	— ..	31½	..
25000	Capula, *s*, Mexico*†	1 12 0 ..	— ..	..	..Aug. 1866
30000	Chontales, *g*, *s*, Nicaragua*†	3 7 6 ..	7⅜..	2⅜ 2⅞	..Feb. 1867
12000	Cobre Copper Company, *c*, Cuba*‡	40 10 0 ..	— ..	..	..
10000	Copiapo Mining Company, Chili†‡	16 10 0 ..	— ..	1½ 2¼	..
10000	Copiapo Smelting, Chili*	10 0 0 ..	— ..	..	..April, 1866
300	Copper Miners' Co. of South Australia* [150 £100 pd., 150 £70 pd.]			..	..Nov. 1866
25000	East del Rey, *g*, Brazil*†	2 15 0 ..	— ..	..	..June, 1866
21500	East Indian Coal, Calcutta	10 0 0 ..	— ..	..	..
15000	El Chico Silver Mining and Reduction Company*	5 0 0 ..	— ..	..	..Nov. 1866
8000	English and Canadian Mining Company*	5 0 0 ..	— ..	..	..Fully pd.
50000	Frontino and Bolivia, *g*, New Granada*†	1 12 6 ..	4s ..	⅛ ⅜	..Dec. 1866
80000	Great Northern, *c*, South Australia†	1 11 6 ..	— ..	..	..Sept. 1862
10000	Great Barrier Land, Mining, &c., New Zealand	5 0 0 ..	— ..	..	..Fully pd.
68000	Kapunda Mining Co., Australia†‡	1 0 0 ..	— ..	..	..
7927	Lusitanian (Portugal)†‡	3 0 0 ..	— ..	..	..
83090	Mariquita	0 12 6 ..	— ..	..	..Jan. 1867
12500	Nerbudda Coal and Iron*† [6000 £5 pd., 6500 £4 pd.]	— ..	— ..	5 ..	4 5 ..Aug. 1865
50000	Nova Scotia Land and Gold*	1 15 0 ..	— ..	..	..Sept. 1865
15000	Otea, *c*, New Zealand* [5000 fully paid]	1 10 0 ..	— ..	..	..April, 1866
6000	Peel River Land and Mineral*†	100 0 0 ..	38 ..	35 38	..Stock.
51000	New Quebrada, *c*, Venezuela*†	3 10 0 ..	— ..	..	..
10178	Rhenish Consolidated, *l* [6000 £5 pd., 4178 £2 10s. pd.]	— ..	— ..	..	..May, 1866
50000	Rosas Grande, *g*, Brazil*	0 10 0 ..	— ..	..	..Mar. 1867
15000	San Pedro del Monte, *s*, Mexico*	4 0 0 ..	— ..	..	..Sept. 1866
10000	San Roque, *l*, Spain	5 0 0 ..	— ..	..	..Fully pd.
1000	Schlossberg Colliery*	10 0 0 ..	— ..	..	..
43174	United Mexican, *s*, Mexico†‡	28 5 0 ..	2¼..	2 2¼	..
10000	Vancouver, *cl*†‡	6 0 0 ..	3 ..	2 3	..
30000	Val Antigoria, *g*††	0 17 6 ..	— ..	..	..July, 1866
6000	Val Sassam, *s*, *c*, *l*†	6 10 0 ..	— ..	..	..Jan. 1867
5000	Valgodemard Mining Company*	20 0 0 ..	— ..	..	..Fully pd.
50000	Vallanzasca, *g*, Italy*†	0 17 6 ..	— ..	..	..July, 1866
45000	Victor Emanuel, *c*, Italy*	1 0 0 ..	— ..	..	..Fully pd.
20000	Washoe, *g*†	5 0 0 ..	— ..	⅛ ..	..Fully pd.
80000	Worching, *c*, South Australia*†	1 0 0 ..	— ..	⅜..	⅜ ⅝ ..Fully pd.
75000	Yorke Peninsula, South Australia	1 0 0 ..	— ..	..	..Fully pd.
45000	Yudanamutana, *c*, S. A.*†‡	3 0 0 ..	1 ..	¾ 1	..

BANKS AND FINANCIAL COMPANIES.

Shares.	Banks.	Paid.	Last Pr.	Bus. done.
40000	Alliance*†	25 0 0 ..	15 ..	14 15 ..
40000	Australian Mort. Land and Finance†	5 0 0 ..	5¼ ..	4¾ 5¼ ..
30000	Australasia†	40 0 0 ..	63 ..	61 63 ..
10000	Bank of Egypt†	25 0 0 ..	35 ..	33 35 ..
50000	Bank of New Zealand†	10 0 0 ..	19 ..	18 19 ..
25000	Bank of Otago*†	10 0 0 ..	6½ ..	5½ 6½ ..
20000	Bank of Victoria, Australia†	25 0 0 ..	39 ..	36 38 ..
20000	British North American†	50 0 0 ..	51 ..	50 52 ..
8915	Canada Company†	32 10 0 ..	71 ..	69 71 ..
50,000	Canadian Loan and Investment*†	2 10 0 ..	— ..	..
44000	Chartered Bank India, Australia, and China†	20 0 0 ..	16 ..	15 17 ..
20000	Chartered Merc. of India, London and China†	25 0 0 ..	32 ..	30 32 ..
50000	City†	10 0 0 ..	12½ ..	12 13 ..
20000	Colonial†	25 0 0 ..	37 ..	35 37 ..
40000	Company of African Merchants.*†	3 0 0 ..	3½ ..	2½ 3½ ..
150000	Consolidated Bank*†	4 0 0 ..	4¾ ..	4½ 4¾ ..
50000	ditto New*†	3 0 0 ..	3½ ..	3¼ 3¾ ..
200000	Credit Foncier and Mobilier of England*†	9 0 0 ..	2¾ ..	..
20000	East London*†	5 0 0 ..	3½ ..	2¾ 2¾ ..
30000	English, Scottish, & Aust., Chart.†	20 0 0 ..	17 ..	16½ 17½ ..
20000	English and Swedish*†	25 0 0 ..	12 ..	15 17 ..
20000	Imperial Bank*†	20 0 0 ..	22 ..	21 22 ..
202500	Imperial Ottoman†	10 0 0 ..	8¾ ..	7¾ 8¼ ..
150000	International Financial Society*†	5 0 0 ..	2⅞ ..	2⅝ 2⅞ ..
300000	International Land Credit*†	6 0 0 ..	4 ..	2½ 3½ ..
50000	London Chartered Bank of Australia†	20 0 0 ..	23 ..	22 23 ..
37500	London and County†	20 0 0 ..	58 ..	56 58 ..
40000	London Financial Association*†	25 0 0 ..	7 ..	1 1¼ ..
72000	London Joint-Stock†	15 0 0 ..	42 ..	41 43 ..
5000	London and River Plate*†	40 0 0 ..	45 ..	42 44 ..
20000	ditto ditto New, issued at 1½ prem.*†	10 0 0 ..	11½ ..	10 11 ..
20000	ditto ditto New*†	10 0 0 ..	11½ ..	10 11 ..
10000	London and South-Western*	20 0 0 ..	19 ..	18 19 ..
5000	London and Venezuela*†	12 10 0 ..	— ..	..
50000	London and Westminster†	20 0 0 ..	94 ..	93 94 ..
50000	Mercantile and Exchange*†	12 10 0 ..	4½ ..	3½ 5½ ..
10000	Merchant*†	25 0 0 ..	16½ ..	15 16 ..
8000	ditto New*†	20 0 0 ..	11 ..	9 11 ..
17156	Metropolitan and Provincial*†	20 0 0 ..	8½ ..	7 8 ..
5000	Midland*†	20 0 0 ..	— ..	18½ 19½ ..
20000	National of Australia†	4 0 0 ..	6 ..	5 6 ..
20000	National of Liverpool*†	15 0 0 ..	14½ ..	12 14 ..
10000	National Provincial of England†	42 0 0 ..	134½ ..	..
55000	ditto ditto 2d and 3d issue†..	12 0 0 ..	39½ ..	..
40000	National†	30 0 0 ..	65 ..	62 64 ..
50000	New South Wales†	20 0 0 ..	46 ..	45 46 ..
60000	Oriental Bank Corporation†	25 0 0 ..	42 ..	41 42 ..
27210	Provincial Banking Corporation*†	10 0 0 ..	4 ..	3 4 ..
20000	Provincial of Ireland†	25 0 0 ..	85 ..	83 85 ..
10000	ditto ditto New†	10 0 0 ..	— ..	..
40000	Union of Australia†	25 0 0 ..	48 ..	46 48 ..
10000	Union of Ireland*†	22 0 0 ..	13 ..	12 14 ..
80000	Union of London†	15 0 0 ..	44 ..	42 43 ..

PROGRESSIVE MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
4000	Ballacorkish, I. of Man, *l*, *c**	2 0 0..	— ..	..	..Jan. 1867
3000	Bedford Unit., *c*, Tavistk.*	2 6 8..	1⅛..	1 1¼	..
3200	Bedol Aur, *l*, Holywell	1 7 0..	— ..	..	..Nov. 1866
500	Billins, *l*, Flint	30 0 0..	— ..	..	..Fully pd.
1248	Boscaswell, *t*, *c*, St. Just	7 6 0..	— ..	..	..Dec. 1866
5000	Bottle Hill, *t*, Plympton	1 14 6..	— ..	..	..June, 1866
200	Brynford Hall, *l*, Flint	28 0 0..	— ..	..	..Jan. 1866
500	Bryn Gwiog, *l*, Flint	9 0 0..	18 ..	16 18	..June, 1864
1200	Bryn Gwyn, *l*, Mold*†	9 0 0..	— ..	..	..
1000	Budnick Consols, *c*, *t*	— ..	— ..	..	..
30000	Caldbeck Fells, *l*, Cumber.*	1 10 0..	⅞..	⅝ ⅞	..Dec. 1866
1000	Camborne Consols, *c*	18 10 0..	— ..	..	..Feb. 1864
4600	Camborne Vn. & Wh. Frn., *c*	11 12 1..	— ..	..	..Mar. 1867
11000	Cape Cornwall, *t*, *c** [8000 £2 10s. pd., 3000 10s. pd.]				..Oct. 1866
914	Caradon Cons., *c*, St. Cleer	32 3 6..	— ..	..	..Feb. 1867
1000	Carn Brea, *c*, *t*, Illogan‡	25 0 0..	13 ..	11 11½	..Nov. 1866
6000	Carn Camborne, *c*, Cambn.	2 1 6..	1 ..	..	..April 1867
5000	Carnarvonshire, *l**	4 0 0..	— ..	..	..Fully pd.
4005	Cardigan Cons.* [1000 £5 pd., 3005 £4 5s. pd.]				..April, 1866
600	Cardiganshire, *l**	17 10 0..	— ..	..	..Sept. 1866
20000	Carysfort [3200 £2½ pd., 16800 £1⅜ pd.]				..Mar. 1865
2500	Cefn Cilcen, *l*, Flint*	2 18 0..	— ..	..	..Aug. 1866
2500	Central Minera, *l**	3 12 6..	— ..	..	..Nov. 1866
16000	Central Snailbeach *l**	1 0 0..	— ..	..	..Fully pd.
3000	Chiverton, *l*, Perranzabu..	9 5 0..	6½..	6¼ 6¾	..Feb. 1867
3000	Chiverton Moor, *l*, Perranz.	6 3 6..	5⅞..	5¾ 6	..Feb. 1867
2000	Chiverton Wheal Hope, *l*..	— ..	— ..	..	..
4000	Clara, Llywernog	2 6 0..	— ..	..	..
2880	Clifford Amalg., *c*, Gwen.‡	32 0 0..	5¼..	5 5½	..
256	Condurrow, *c*, *t*, Camborne‡	76 10 0..	17 ..	15 16	..
50000	Cononree, *c*, *sul*, Wicklow*	1 0 0..	13 ..	..	..Fully pd.
2450	Cook's Kitchen, *c*, Illogan‡	19 14 9..	10 ..	9 11	..July, 1866
1024	Copper Hill, *c*, Redruth‡	12 10 0..	— ..	..	..June, 1866
6885	Cornish Clay and Tin	1 0 0..	— ..	..	..Fully pd.
1055	Craddock Moor, *c*, St. Cleer‡	11 19 0..	— ..	..	..Mar. 1867
861	Crane, *c*, Camborne	33 9 6..	— ..	..	..Dec. 1866
12000	Crelake, *c*, Tavistock	3 8 0..	— ..	..	..July, 1866
6000	Cuddra, *l*, St. Austell	5 0 0..	— ..	..	..Oct. 1866
35000	Dale, *l*, North Stafford	1 0 0..	— ..	..	..Fully pd.
5000	Devon Great Maria*	7 0 0..	— ..	..	..May, 1866
4000	Devon Wheal Frances, *c*	1 5 9..	— ..	..	..Mar. 1867
1024	Dev. Wh. Lopes, Bickleigh	18 10 0..	— ..	..	..Mar. 1867
12800	Drake Walls, *t*, Calstock‡	2 5 0..	⅛..	⅜ ⅛	..Dec. 1866
656	Ding Dong, *t*, Gulval‡	49 14 6..	— ..	..	..Dec. 1866
20000	Dolfrwynog, *g**	0 15 0..	— ..	..	..June, 1864
25000	Dundaik, Ireland, *l**	0 15 0..	— ..	..	..Feb. 1867
3000	Dyfngwm, *l*, Wales	13 7 0..	— ..	..	..June, 1866
740	Eaglebrook, *l**	19 15 0..	— ..	..	..July, 1866
512	East Basset, *c*, Redruth†‡	29 10 0..	19 ..	17 20	..
1000	East Basset and Grylls, *t*..	3 5 0..	— ..	..	..July, 1865
6000	E. Bottle Hill, *t*, Plympton	0 8 6..	⅛..	⅜ ⅛	..Dec. 1866
4096	East Brookwood, Holne	2 8 8..	— ..	..	..July, 1866
6000	E. Carn Brea, *c*, Redruth‡	3 15 0..	2⅞..	2½ 2¾	..
4000	East Chiverton, *t*, Perranz.	2 11 9..	— ..	..	..Mar. 1867
6000	E. Grenville, *c*, Camborne	3 6 6..	2⅞..	2½ 2¾	..Feb. 1867
4000	E. Gunnislake & S. Bed. *c*	9 4 6..	— ..	..	..Mar. 1867
6000	East Laxey, *l*, Isle of Man*	2 10 0..	— ..	..	..Dec. 1865
1000	East Moor, *s*	0 5 0..	— ..	..	..Aug. 1866
3986	E. Providence, *t*, Uny Lel.	5 1 9..	— ..	..	..Feb. 1867
6000	East Snaefell, *l*, I. of Man*	2 0 0..	— ..	..	..Dec. 1864
5610	East Seton, *c*, Camborne	0 11 0..	— ..	..	..Oct. 1865
9000	E. St. Just, *t** [6000 £3 10s. pd., 3000 £1 10s. pd.]				..Nov. 1866
256	East Toigus, *c*, Redruth	96 0 0..	— ..	..	..April, 1866
1190	E. Wh. Agar, *c*, St. Cleer..	12 17 0..	— ..	..	..Jan. 1865
4000	E. Wh. Russell, Tavistock†	11 16 6..	3 ..	2¾ 3	..Jan. 1867
6000	Fortescue Consols, *c*	0 12 6..	— ..	..	..
940	Fowey Con., *c*, Tywardreath‡	5 4 6..	— ..	..	..Feb. 1867
6000	Furze Hill Wood Con. Buckl.	1 16 0..	— ..	..	..Feb. 1866
10000	Fursdon, *c** [5000 £1 10s.]..	— ..	— ..	..	..Mar. 1865
4096	Garlidna Unit., *t*, Wendron	5 7 7..	— ..	..	..Feb. 1866
4000	Gawton, *c*, Tavistock	3 5 6..	3 ..	2½ 3	..Feb. 1866
6000	Gen. Min. Co. for Ireland, *c*	4 0 0..	— ..	..	..
40000	Glasgow Caradon *c** [30000 £1 pd., 10000 10. pd.]				..Sept. 1866
6144	Gonamena, *c*, St. Cleer	5 19 6..	— ..	..	..April 1867
6000	Gothic, *s-l*, Cardigan*	2 10 0..	— ..	2⅞ 3	..Fully pd.
486	Grambler and St. Aubyn†‡	71 0 0..	4¼..	4 5	..Mar. 1867
4096	Great Caradon, *c*, St. Ive..	3 13 0..	— ..	..	..Feb. 1867
3000	Gt. East Lovell, *t*, Helston	2 1 0..	— ..	..	..Nov. 1866
5000	Great Mona, *l*, Isle of Man*	3 10 0..	— ..	..	..June, 1866
5000	Great North Downs, *c*	6 13 0..	4 ..	4 4¼	..Feb. 1867
12500	Gt. No. Laxey (Isle of Man)*	0 12 6..	1¼..	1¼ 1⅜	..Jan. 1867
4800	Great Retallack, *s-l*, *b*	1 19 0..	3½..	3¼ 4	..Jan. 1867
6000	Great South Chiverton, *s-l*.	1 12 6..	— ..	..	..Jan. 1867
6000	Gt. So. Toigus, *c*, Redruth.	0 19 6..	⅝..	½ ¾	..Aug. 1866
3313	Great Wheal Baddern, *t*	7 17 6..	— ..	..	..June, 1863
1798	Gt. Wh. Fortune, *t*, Breage	27 14 6..	— ..	..	..Mar. 1867
119	Great Work, *t*, Germoe	100 0 0..	— ..	..	..
10240	Gunnislake (Clitters'), *t*, *c*	4 19 0..	— ..	..	..April 1867
6068	Gwydyr Park, *l*, Llanrwst	1 13 0..	— ..	..	..Nov. 1866
6000	Hallenbeagle, *c*, Kenwyn	2 17 0..	— ..	..	..April 1867
6400	Harwood, *l*, Durham*	0 6 0..	¾..	½ ¾	..Sept. 1864
5000	Havan, *l*, Cardigan*	4 15 0..	— ..	..	..Mar. 1866
305	Injebreck and Garrahan*..	1 0 0..	— ..	..	..
6000	Illogan, *t*, *c*	0 19 6..	— ..	..	..June, 1866
6000	Lady Bertha, *c*, Tavistock.	4 1 0..	— ..	..	..Jan. 1866
3000	Leawood, *c*, *l*, Lydford	3 3 6..	— ..	..	..June, 1866
1019	Leeds and St. Aubyn, *t*, *c*..	19 13 4..	— ..	..	..Mar. 1866
160	Levant, *c*, *t*, St. Just	10 8 1..	— ..	..	..June, 1866
6000	Levant United, St. Just‡..	0 10 0..	— ..	..	..
1024	Lovell Consols, *t*	— ..	3¼..	..	..
3000	Maes-y-Safn, *l**	20 0 0..	— ..	..	..Jan. 1866
6000	Mandlin, *c*, Lostwithiel	4 7 0..	— ..	..	..May, 1865
5000	Merllyn, *l*, Flint	3 15 6..	— ..	..	..Jan. 1866
640	Mount Pleasant, *l*, Mold	4 0 0..	— ..	..	..
1024	Nangilles, *t*, *c*, Kea	27 5 0..	— ..	..	..Feb. 1867
250	Nanty Mines, *l*, Montgom.	30 0 0..	— ..	..	..Aug. 1866
12800	Nether Hearth* [6400 £1 pd., 6400 2s. pd.]				..
6000	New Birch Tor & Vitifer, *t*‡	1 6 6..	— ..	..	..
6000	New Clifford, *c*, Gwennap*	2 3 0..	— ..	..	..Feb. 1867
24000	New Cornish [12000 £1 pd., 12000 13s. pd.]				..Sept. 1866
6400	N. Crow Hill, *l*, St. Stephen	3 2 0..	— ..	..	..Nov. 1866
6514	New E. Russell, *c*, Tavistk.	0 11 6..	⅝..	⅜ ⅝	..April, 1867
400	New Hendra, *t*, *c*	14 11 0..	— ..	..	..Mar. 1866
6400	New Pembroke, *t*, *c*	1 2 6..	— ..	..	..Mar. 1867
6000	New Tamar, *s-l*	0 7 6..	— ..	..	..Dec. 1866
5755	New Treleigh, *c*, Redruth..	4 8 0..	— ..	..	..May, 1866
960	New Trevenen, *t*, Wendron	8 14 0..	— ..	..	..May, 1866
4096	New Wheal Lovell, *t*	1 11 0..	— ..	..	..Jan. 1867
400	New Wh. Seton, *c*, Cambn.	53 15 0..	— ..	..	..Dec. 1866
2000	New Wheal Towan, *c*, *t*	1 10 0..	— ..	..	..July, 1866
16000	North Devon, *s-l**	0 16 0..	— ..	..	..July, 1866
5000	No. Dolcoath, *c*, Camborne.	4 3 0..	— ..	..	..Mar. 1867
3457	North Downs, *c*, Redruth..	4 8 10..	— ..	¼ ⅛	..Jan. 1867
1361	No. Grambler, *c*, Redruth..	6 19 2..	— ..	..	..Dec. 1866
16000	N. Hallenbeagle [8000 £1 pd., 8000 8s. 6d. pd.]				..July, 1865
6000	North Jane, *t*, *s-l*, Kenwyn.	3 1 6..	1 ..	¾ 1	..Mar. 1867
2000	North Levant, *t*, *c*, St. Just	10 12 0..	— ..	..	..April, 1867
20000	Nth. Minera, *l*, Wrexham*	1 0 0..	— ..	..	..Fully pd.
4000	N. Phœnix, *c*, Linkinhorne	4 4 0..	— ..	..	..May, 1864
3933	North Pool, *c*, Illogan	5 16 0..	4 ..	3 4	..Mar. 1867
1024	North Retallack Mine	2 0 0..	— ..	..	13¼ 2¼ ..Feb. 1867
695	No. Roskear, *c*, Camborne.	50 8 0..	8 ..	6 8	..Mar. 1867
2000	No. Shepherds, *l*, Newlyn..	6 0 0..	— ..	..	..July, 1866
5936	No. Treskerby, *c*, St. Agnes	1 9 0..